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The November *Review*

In the interval since April 1994, when the *Review* last published an article on employment and unemployment in Mexico, that nation has undergone a significant cycle in its general business condition. Gary Martin's article updates our earlier article and reinforces the notion that attempting to apply twin definitions of employment in economies that differ significantly can reveal as much about the differences as about anything else. In particular, Martin notes that conventionally-measured employment continued to grow despite a substantial drop in measured output in 1995. He attributes this to the role of the informal sector in Mexico's economy: growth in employment in very small enterprises, jobs without fringe benefits, and jobs in rural areas provided subsistence for many as jobs in the more formal sector became scarcer.

Rose Rubin, Shelley I. White-Means, and Luojia Mao Daniel take a broad look at income distributions within the group of elderly households and the comparison of their incomes with other households. Their findings suggest that inequality within the group has declined somewhat over the past three decades. These findings should encourage additional research.

Mary Kokowski investigates the potential differences between aggregating the Consumer Price Index using a "plutocratic" aggregation method—the relative levels of total expenditure provide the weights—used in the current index to a "democratic" index in which each household's expenditure pattern is equally weighted. She suggests that there is little empirical difference between the democratic and plutocratic index values except extreme scenarios of rapid price change among goods that are inelastic in demand.

Stock options

In 1999, 1.7 percent of all private industry employees received stock options. Executives were about three times as likely to get stock options than were other employees, 4.6 percent versus 1.6 percent, respectively. The share of nonexecutive employees offered stock options ranging from 0.7 percent for those earning less than $35,000 to 12.9 percent for those earning $75,000 and more.

The likelihood that employees received stock options also varied by industry, from 0.2 percent in nondurable manufacturing industries to 5.3 percent in durable manufacturing industries, and by geographic region, from 1.1 percent in the Northeast to 2.1 percent in the West. Read more in "Pilot Survey of the Incidence of Stock Options in Private Industry in 1999," news release USDL 00–290.

Productivity growth fastest in United States

Of 10 industrialized countries, the United States gain in manufacturing labor productivity of 6.2 percent was the highest in 1999. Productivity growth in the United Kingdom was 4.3 percent, while France registered a growth rate of 4.0 percent. Other countries with notable increases in manufacturing output per hour were Japan and Sweden. Productivity in the manufacturing sector rose by 3.1 percent in Japan and 2.9 percent in Sweden.

Partly as a result of the faster productivity growth, the index of unit labor costs in U.S. manufacturing in 1999 edged down to 80.1 percent of an index of competitors' costs measured in dollars; in 1998, the percentage was 83.5 percent. Additional information is available in "International Comparisons of Manufacturing Productivity and Unit Labor Cost Trends, 1999," news release USDL 00–295.

Occupational earnings

Workers in the highest paid occupation earned on average more than three times as much per hour as those in the lowest paid in 1998. Mean hourly earnings of workers in executive, administrative, and managerial positions were $28.63 in 1998, compared with $7.85 for those in service occupations.

The second highest paid occupation in 1998 was professional specialty and technical, with an average of $23.63 per hour. The second lowest was handlers, equipment cleaners, helpers, and laborers, with mean hourly earnings of $9.52. In the remaining occupations, hourly earnings averaged between $10 and $20. Learn more in *National Compensation Survey: Occupational Wages in the United States, 1998*, BLS Bulletin 2529. □

Communications regarding the *Monthly Labor Review* may be sent to the Editor-in-Chief at the addresses on the inside front cover, or faxed to (202) 691–5899. News releases discussed in this issue are available at

http://stats.bls.gov/newsrels.htm

Employment and unemployment in Mexico in the 1990s

Focusing only on Mexico's total employment and its unemployment rate obscures an important response to economic downturns, namely, relative growth in the informal sector

Gary Martin

Travelers are often cautioned against viewing other countries through the lens of their own cultural bias. Economists must be warned as well about the pitfalls of evaluating the performance of economies that differ greatly from those that they are accustomed to examining. Although Mexico joined with the United States and Canada in the North American Free Trade Agreement in 1994, this alliance should not cause one to lose sight of the fact that Mexico's economy continues to differ considerably from those of its northern neighbors. The application of the usual measures of "employment" and "unemployment" to evaluate Mexico's economic performance in the 1990s reveals many such differences.

For the first 4 years of the 1990s, Mexico's economy grew at an annual rate of 3.6 percent, continuing the long recovery from the 1982 "debt crisis." The economy experienced a sharp decline in 1995, however, as a result of the "peso crisis" of late December 1994. Gross domestic product fell by 6.2 percent, but employment actually rose slightly. Unemployment rose sharply, although the level reached was not particularly high by world standards. The impact of the crisis, both in severity and duration, shows up more clearly in *other* indicators, such as those for the composition of employment and the trend in real wages. This article focuses on the employment side, but includes some information on the wage trend.

Gary Martin is an economist in the Division of Foreign Labor Statistics, Bureau of Labor Statistics.

In economies such as Mexico's, the "informal sector," made up primarily of small establishments providing marginal, insecure, and low-paying jobs, looms large in the best of times.[1] Because Mexico lacks a broad social safety net, this sector takes on added significance in hard times, as the data clearly revealed in the immediate wake of the 1994 peso crisis. Overall, employment continued to increase, but the rate of growth slowed. Employment in the smallest establishments and in jobs with no fringe benefits grew at a much faster rate than did employment overall. Employment also rose much more in Mexico's less urban areas, where the data suggest the informal sector is more dominant, than it did in the more urban areas.

Real wages fell substantially in 1995. But while gross domestic product rose sharply in the following years, real wages remained well below pre-crisis levels through 1998.[2] (See table 1.) The lingering effects of the downturn also still could be seen on the employment side of the labor market. By 1997, unemployment had returned to pre-crisis figures, and the rate of employment growth was greater than before; even so, the aggregates conceal a disproportionately high rate of growth over the longer term in a number of key indicators of informality.

The three key indicators of informality found in Mexico's National Employment Survey, the primary source of data for this article, are (1) "employed in establishments with five or fewer

Table 1. Annual percentage change in real gross domestic product in Mexico, 1990–99 (1993 prices)

Beginning year	Ending year								
	1991	1992	1993	1994	1995	1996	1997	1998	1999
1990	4.2	3.9	3.3	3.6	1.5	2.1	2.8	3.0	3.1
1991	...	3.6	2.8	3.3	.9	1.7	2.5	2.9	3.0
1992	...	...	2.0	3.2	.0	1.2	2.3	2.7	2.9
1993	...	...	...	4.5	–1.0	1.0	2.4	2.9	3.0
1994	...	...	...	...	–6.2	–.7	1.7	2.5	2.7
1995	...	...	...	...	...	5.1	5.9	5.6	5.1
1996	...	...	...	...	...	...	6.8	5.8	5.1
1997	...	...	...	...	...	...	...	4.8	4.2
1998	...	...	...	...	...	...	...	...	3.7

SOURCE: *OECD Economic Surveys, Mexico, 1997–1998*, p. 135 for 1990–96 data; INEGI, *Cuaderno de Información Oportuna*, September 1999, tables 1.1 and 1.4 for 1997 data, and June 2000 for 1998 and 1999 data.

workers," (2) "self-employed," and (3) "without any employment benefits."[3] None of these measures is necessarily a measure of informality.[4] However, a relatively small proportion of workers in an advanced, industrial economy falls into any of those categories, while a relatively high proportion of workers in the developing world does. Consequently, this leads to the assumption that intertemporal and interregional differences in these categories in Mexico indicate differences in the importance of the informal sector.[5] Data used as indicators of formality from the National Employment Survey are (1) "employed in establishments with six or more employees," (2) "with some employment benefits," and (3) "covered by social security." Administrative data from Mexico's Social Security Institute supplement the third category.

This article updates a 1994 *Monthly Labor Review* article on Mexico's employment and unemployment.[6] It presents more recent calculations of Mexico's unemployment rates under U.S. concepts, and updates Mexico's complementary unemployment indicators that cover aspects of the country's employment situation missed by the unemployment rate. It also examines the importance of the informal sector in Mexico over a longer time period and under a wider range of economic conditions than does the previous article. Improvements in Mexico's labor data since 1994, including greater geographic coverage, more consistency in methodology, and more frequent availability of results, enrich the new analysis. (See appendix.)

Low general unemployment

For many years, unemployment has been strikingly low in Mexico, as reported both by the National Employment Survey, done annually only since 1995, and by the monthly Urban Employment Survey. (See appendix.) According to the urban survey, the average annual official rate of unemployment during the 1991–99 period was 3.7 percent.[7]

That rate may be contrasted with an average annual unemployment rate of 5.8 percent for the United States and 9.7 percent for Canada.[8] The figure for Mexico is deceptive. The job situation was not substantially better there compared with its two North American Free Trade Agreement partners. Fleck and Sorrentino have noted two principal reasons for the difference in the unemployment rate in Mexico and the United States: the measurement concepts themselves are different, and many people who are counted as employed in Mexico find only unproductive and marginal employment in Mexico's large informal sector.[9]

Adjustment to U.S. concepts

Adjustments of Mexico's unemployment rates to U.S. concepts are shown in table 2. The National Employment Survey was used for consistent geographic coverage through time, and only its more urban areas were considered to correspond as closely as possible to the Urban Employment Survey from which the official unemployment rates are generated. The National Employment Survey identifies cities with a population of 100,000 and more, plus all state capitals, as "more urban areas." This is contrasted with the remainder of the country, called "less urban areas." (See appendix for more details on the two surveys.) Three adjustments were made, two to unemployment and one to the labor force. Mexico counts as employed two groups of people that the United States generally includes among the unemployed and one group that the United States omits from the labor force altogether. The first two groups are those on temporary layoff and those who anticipate starting a job within 30 days. Concerning the latter group, since January 1994, the U.S. Current Population Survey designates as unemployed only those persons waiting to start a new job who have engaged in a job search within the past month. If they have not searched for a job in that period, they are not in the labor force.[10] Mexicans who are already counted as employed are not asked about their job search history, so there is no way of knowing how many among those expecting to start work within the next month actually looked for work. In counting all those individuals in Mexico waiting to start work as "unemployed" using U.S. definitions in this article, it is assumed that all those who think they have a job in hand but have not yet begun to work, sought that job or some other job in the previous month. The third adjustment involves a subtraction from the labor force of unpaid fam-

Table 2. Adjustment of Mexico's unemployment rates to U.S. concepts, more urban areas, second-quarter 1991, 1993, 1995–98

Category	Total	Men	Women	Total	Men	Women	Total	Men	Women
	1991			1993			1995		
Reported unemployment	352,114	209,144	142,970	490,941	306,703	184,238	1,107,667	700,748	406,919
Plus:									
Persons on temporary layoff	142,141	93,359	48,782	190,966	126,286	64,680	104,111	63,434	40,677
Persons waiting to start a new job in 30 days	92,311	58,347	33,964	94,197	61,238	32,959	104,255	68,026	36,229
Adjusted unemployed	586,566	360,850	225,716	776,104	494,227	281,877	1,316,033	832,208	483,825
Reported labor force	14,706,007	9,617,006	5,089,001	15,705,194	10,220,312	5,484,882	16,554,068	10,597,341	5,956,727
Minus unpaid family workers working less than 15 hours per week[1]	140,798	57,898	82,900	180,419	77,940	102,479	175,337	58,320	117,017
Adjusted labor force	14,565,209	9,559,108	5,006,101	15,524,775	10,142,372	5,382,403	16,378,731	10,539,021	5,839,710
Unemployment rates:									
Reported	2.4	2.2	2.8	3.1	3.0	3.4	6.7	6.6	6.8
Adjusted	4.0	3.8	4.5	5.0	4.9	5.2	8.0	7.9	8.3
	1996			1997			1998		
Reported unemployment	953,690	601,453	352,237	615,530	342,101	273,429	590,610	337,892	252,718
Plus:									
Persons on temporary layoff	158,082	111,054	47,028	124,975	90,084	34,891	189,713	127,122	62,591
Persons waiting to start a new job in 30 days	94,516	57,351	37,165	121,767	66,685	55,082	105,457	61,071	44,386
Adjusted unemployed	1,206,288	769,858	436,430	862,272	498,870	363,402	885,780	526,085	359,695
Reported labor force	17,052,788	10,936,842	6,115,946	17,906,946	11,298,267	6,608,679	18,793,502	11,858,117	6,935,385
Minus unpaid family workers working less than 15 hours per week[1]	193,662	80,790	112,872	219,962	77,025	142,937	213,261	94,570	118,691
Adjusted labor force	16,859,126	10,856,052	6,003,074	17,686,984	11,221,242	6,465,742	18,580,241	11,763,547	6,816,694
Unemployment rates:									
Reported	5.6	5.5	5.8	3.4	3.0	4.1	3.1	2.8	3.6
Adjusted	7.2	7.1	7.3	4.9	4.4	5.6	4.8	4.5	5.3

[1] Predominantly unpaid family workers; however, a few nonfamily workers are included.

NOTE: The "more urban areas" are those with 100,000 or more inhabitants and state capitals.

SOURCE: INEGI, National Employment Survey 1991, 1993, 1995, 1996, 1997 and 1998, including unpublished data.

ily—and some nonfamily—workers working less than 15 hours per week.[11] Such persons are excluded from the U.S. labor force.

The rate of unemployment is the ratio of total unemployed to the total civilian labor force expressed as a percentage. All three adjustments raised the rate of Mexico's unemployment, the first two by increasing the size of the numerator, the third by reducing the size of the denominator. The adjustments added an average of 1.6 percentage points to the unemployment rate over the period.[12]

This is actually an overadjustment on several counts. First, some unknown portion of those waiting to start a new job would not have sought work in the 4 weeks prior to their interview and would be dropped both from the ranks of the unemployed and the labor force under U.S. concepts.

Second, in the United States, one must have actively sought work to be in the labor force. An active job search method is defined as any effort that could have resulted in a job offer without any further action on the part of the jobseeker. In Mexico, the respondent need only say that he or she sought work in the past 4 weeks to be counted.

Third, in the United States a respondent must have been available for work in the reference week (the last full workweek before the interview) to be counted as part of the labor force. In Mexico the assumption is made that if they sought work they were available. No test of availability is applied.

Fourth, in some cases when there is no sign of a discouraged attitude, the respondent in Mexico is counted as in the labor force even though he or she may not have sought work in the past 4 weeks.[13]

If sufficient information existed to account for these individuals who are included in the labor force in Mexico and excluded in the United States, then it would lower the adjusted unemployment rate by reducing both the total number of unemployed and the total labor force. For the category of those waiting to start a new job, the reduction would only be calculated since 1994. For the others, it would be calculated for the entire period.

No adjustments have been made for the fact that the working age population in Mexico is 12 years and older and in the United States it is 16 years and older. Indications are that such an adjustment would have little effect. The average unemployment rate in the more urban areas for the years the National Employment Survey was taken, 1991–98, was 4.06 percent for those 12 years and older and 4.07 percent for those 15 years and older. The 12 through 14 age group averaged only 1.4 percent of the labor force throughout the period.[14]

Overstated though it may be, the adjusted 1995 unemployment rate of just 8 percent (3 percentage points more than the 1993 adjusted rate) is still quite low in light of the steep decline in Mexico's economy. The United States has had nothing like a 1-year drop of 6 percent in gross domestic product in recent memory, and much smaller declines have been associated with greater relative unemployment and employment changes.[15] Mexico's adjusted unemployment rate, even restricted to urban areas where, as shown later in the article, unemployment is consistently higher than for the country as a whole, appears to reflect economic distress to a lesser extent than does the U.S. unemployment rate.[16]

Examining the data for the entire period, however, a different picture emerges. The average rate of unemployment for the 6 discontinuous years considered, after the adjustment, is 5.64 percent contrasted with 5.68 percent for the United States for the same 6 years. Disregarding the slight overadjustment, differences in the definitions themselves

Rates of unemployment and labor underutilization

Of the 10 rates, R-1 through R-10, all but R-2 and R-10 are calculated as a proportion of the labor force. R-2 counts "discouraged workers" among the unemployed in the numerator, so they are added to the labor force in the denominator as well. R-10 is not an unemployment rate at all but a measure of the working poor, so it is given as a proportion of total employment.

R-1 *Open unemployment rate:* Persons in the labor force who did not work for at least one hour in the reference week (the previous full work week) or do any unpaid family work, as a percent of the labor force. This is the official unemployment rate.

R-2 *Alternative unemployment rate:* Open unemployed, plus persons who expect to begin work within the next 4 weeks, plus persons not in the labor force, but who are available for work and who looked for work at some time in the past (the hidden unemployed), as a percent of the labor force and the hidden unemployed.

R-3 *Real economic pressure rate:* Open unemployed and employed seeking a second job, as a percent of the labor force.

R-4 *Real preference pressure rate:* Open unemployed and employed seeking a new job, as a percent of the labor force.

R-5 *General pressure rate:* Open unemployed and employed seeking either a new job or a second job, as a percent of the labor force.

R-6 *Part time less than 15 hours and unemployment rate:* Open unemployed and employed working less than 15 hours a week, as a percent of the labor force.

R-7 *Part time for economic reasons and unemployment rate:* Open unemployed and employed working less than 35 hours a week for economic reasons, as a percent of the labor force.

R-8 *Part time less than 35 hours and unemployment rate:* Open unemployed and employed working less than 35 hours a week, as a percent of the labor force.

R-9 *Insufficient income and unemployment rate:* Open unemployed and employed who earn less than the minimum wage, as a percent of the labor force.

R-10 *Critical conditions of the employed rate:* Employed working less than 35 hours a week for economic reasons, working more than 35 hours a week while earning less than the minimum wage, or working more than 48 hours a week while earning less than 2 times the minimum wage, as a percent of total employment.

Though these various rates may give a more complete picture of hardship experienced by Mexico's workforce, none quite captures the phenomenon of the informal sector and its marginal, insecure, and relatively unproductive labor. R-2 bears a resemblance to the U.S. unemployment measure in that it incorporates among the unemployed those who are waiting to start work in the next month (although, as noted earlier, since 1994, such individuals must have actively sought work in the past month to be included in the labor force, and, thus, among the unemployed). It goes further by including, as well, those who had become discouraged and suspended their job search. It does not, however, add to the unemployed those who are temporarily laid off, nor does it add to the labor

may explain why Mexico's urban unemployment rate remains lower than the overall rate in the United States. Despite that, these adjustments fail to account for the large number of people in Mexico who are counted as employed, but who still live around the economy's margins. These people have only a small counterpart in the United States.

Complementary rates

Because the conventional unemployment rate does not adequately reflect the ability of the economy to provide suitable jobs, Mexico's *Instituto Nacional de Estadística, Geografía, e Informática* (National Institute of Statistics, Geography and Informatics, or INEGI) has developed a number of alternatives. The official or *open* rate suggests by its name that there are a number of people in the country whose *de facto* unemployment or underutilization is hidden. This official rate is accompanied in the monthly statistics by nine additional measures. (See box for a description and evaluation of each of the alternative measures.) These complementary rates of unemployment, underemployment, and employment with very low remuneration are intended to give a more complete picture of the state of the labor market. They are derived from the Urban Employment Survey and published monthly. Yearly averages from 1991 to 1998 are in table 3.[17]

All the alternatives except the last (R-10) simply incorporate other measures of presumed hardship into the open unemployment rate. One way of evaluating their effectiveness as measures of hardship is to examine how they performed in the crisis year of 1995. Were they generally more sensitive to the downturn than was the open unemployment rate?

In fact, they were not. For R-2 through R-8, the increases in the rates in 1995 are all substantially explained by the increases in the rates of their R-1, or open unemployed, components. The increase in R-9 goes considerably beyond the

force unpaid family workers working less than 15 hours a week. There are enough similarities, on balance, between R-2 and the U.S. method of unemployment measurement to explain, to a degree, the fact that R-2 and the rate adjusted to U.S. concepts both average 1.6 percentage points higher than R-1 in the years reported. There are enough differences, however, that R-2 should not be seen as a surrogate for unemployment as it would be measured in the United States.

R-3 through R-5 are measures of job dissatisfaction or inadequacy added onto R-1, and provide no indication of why the new job might be sought. The marginal nature of the existing job is only one of a number of possible explanations. The remarkable thing here is how low these rates remained throughout the period, with R-5—which simply combines R-3 and R-4—not reaching double digits even during the crisis conditions of 1995. The same low expectations, relative to the alternative, that keep so many people out of the formal job market could well be responsible for the low level of job search generally, whether the potential searchers are currently employed or not. (The connection between high levels of informal employment and low levels of search for formal jobs was noted in a letter from INEGI, July 6, 2000. To support the observation, the Institute further notes that the 1996 survey of microscale operations found that less than 5 percent of own-account workers would have been willing to shift to salary work. The relatively greater opportunities for those with little formal education in the informal sector, they note, would also explain why many potential employers in the manufacturing sector in the last couple of years complain of labor shortages at the same time that the size of the informal sector remains great.)

In the case of R-6, adding on those working 15 hours or less a week might capture a few who have no other choice, but it probably includes more who do. Workers in the informal sector can no more afford to work so few hours than they can afford to be unemployed. R-7, which adds to the category of unemployed those persons working less than 35 hours a week for economic reasons, does not capture the informal sector because the economic reasons are defined quite narrowly, suggesting that the condition is only temporary. The economic reasons are a cutback in production, owing to a failure of sales, of financing, of raw materials, or of equipment. It does not include all those who are working so few hours simply because they have no other choice. R-8, on the other hand, is probably too broad a definition because, like R-6, it would include a number of people who choose to work limited hours.

That leaves R-9 and R-10, which would seem to capture best the marginal workers of the informal sector of the economy. Each attempts to bring into the measure the working poor. Unfortunately, each relates income to the minimum wage, not allowing sufficiently for the decline in the value of the minimum wage resulting from inflation. The minimum wage has periodically been increased, but the increases have not kept pace with inflation. (In 1994, for instance, the real minimum wage was 60 percent below its 1981 level. See *OECD Economic Surveys, Mexico, 1996–1997* [Paris, Organization for Economic Cooperation and Development, 1996], p. 94.)

Table 3. Unemployment rates and underutilization rates in Mexico, more urban areas, 1991–99

[In percent]

Geographic coverage, year and quarter	R-1 Open unemployment rate	R-2 Alternative unemployment rate	R-3 Real economic pressure rate	R-4 Real preference pressure rate	R-5 General pressure rate	R-6 Part-time less than 15 hours and unemployment rate	R-7 Part-time for economic reasons and unemployment rate	R-8 Part-time less than 35 hours and unemployment rate	R-9 Insufficient income and unemployment rate	R-10 Critical conditions of the employed rate
16 urban areas										
1991	2.6	4.2	3.5	4.0	4.8	6.1	4.8	20.8	11.7	14.3
34-37 urban areas										
1992[1]	2.8	4.8	4.0	4.4	5.5	6.5	5.3	21.6	10.9	14.1
1993[2]	3.4	5.6	4.8	5.3	6.6	7.7	6.3	23.0	12.4	14.2
37-45 urban areas										
1994[3]	3.7	5.9	4.6	5.4	6.4	7.8	6.2	22.3	11.3	13.7
1995[4]	6.3	8.6	7.7	8.3	9.8	10.7	8.5	25.7	16.2	15.7
1996[5]	5.4	6.4	6.8	7.3	8.7	10.0	7.3	25.3	17.2	16.6
1997[6]	3.7	4.6	4.8	5.4	6.6	8.3	5.4	23.4	16.4	16.6
1998[7]	3.1	4.1	4.0	4.6	5.4	7.3	4.6	21.4	14.5	14.5
1999[7]	2.5	3.4	3.1	3.5	4.0	6.1	3.8	19.1	12.8	13.2

[1] Average calculated from first two quarters covering 32 cities and last two quarters covering 34 cities.
[2] Covers 34 cities in first quarter, 35 in second, 36 in third, and 37 in fourth.
[3] Covers 37 cities in first two quarters, 38 in third, and 39 in fourth.
[4] Covers 39 cities.
[5] Covers 41 cities January and February; 43 cities the rest of the year.
[6] Covers 44 cities.
[7] Covers 45 cities.

NOTE: See box for full defintion of the rates. Rates are yearly averages from the monthly Urban Employment Survey.

SOURCE: 1993, Fleck and Sorrentino, p. 23; 1994–96, INEGI, *Cuaderno de Información Oportuna*, table 2.16, various issues; 1997–99, INEGI, *Indicadores de Empleo y Desempleo*, various issues.

unemployment increase, but it and R-10 are flawed measures. Each measure attempts to incorporate poverty into the rate by including those persons whose wages are either below the minimum wage or are only slightly above, but who work long hours. The legal minimum wage that is used for this measure, however, has not kept pace with inflation; consequently, there is a downward bias in each of these rates.

Had R-9 been fully adjusted for inflation, it would have captured, primarily in 1995, the rise in open unemployment and the effect on the lowest paid wage earners of the fall in the real wage. To the extent that anyone working for less than the legal minimum wage is not formally employed in an establishment that obeys the labor laws, this rate also would have captured some of the growth in informal sector employment in 1995, although informal sector workers are not necessarily so poorly paid.

In sum, the one measure of worker hardship among the overabundance of alternatives that might have been clearly superior to the unemployment rate cannot be relied upon because of its downward bias. The conventional unemployment rate remains, then, the natural fallback position, even with its weaknesses.

The informal sector 'buffer'

Compared with the United States, Mexico still exhibits many of the characteristics of a developing country. Table 4 shows that roughly 20 percent of Mexico's employed workers are in agriculture, compared with only 3 percent in the United States.[18] The birth rate in Mexico, as of 1997, was 25 per 1,000, compared with 15 per 1,000 in the United States, and the overall level of per capita output and income is much lower.[19] Hourly compensation of manufacturing production workers in 1999 in Mexico was only 12 percent of compensation for such workers in the United States (down from 22 percent in 1980 and 17 percent in 1994).[20] In 1996, Mexico's per capita gross domestic product was 28 percent of the U.S. level when measured at purchasing power parities.[21] Indeed, the existence of a large, relatively unproductive informal sector is both a major cause and a consequence of Mexico's lower gross domestic product per capita. Income is also substantially less equally distributed in Mexico than it is in the United States.[22]

Mexico has no program of unemployment compensation, which is another obvious reason for its low unemployment rate.[23] Few people can afford the time it might take to look for the most desirable job. In some cases, mandated severance pay provides some cushion, scaled up in accordance with the number of years the dismissed worker has been employed. Rather than facilitating an extended period of job search, thus pushing up the rate of unemployment, as unemployment compensation does, severance pay, on balance, likely reduces the rate of unemployment. The dismissed worker might feel less financial pressure to look for work

immediately, but when the employer is unable to save anything near the full cost of a worker's salary by laying him off, he may be discouraged from doing so in the first place.[24]

Such legally-mandated, employer-borne employment protection of a type that is more stringent in Mexico than in most industrialized countries also contributes to the size of the informal sector.[25] Employers are driven, or tempted, to work outside the purview of labor regulators. Mexico is said to suffer from an "informality trap" because of the narrow base of employers upon whom social security contributions (IMSS), a housing fund (INFONAVIT), and the new individual accounts for retirement (SAR) must fall.[26]

Mexico's large urban informal sector and migration, both back to the countryside and to the United States, are particularly important in hard economic times, acting as a buffer to inhibit the growth of open unemployment.[27] Evidence presented below indicates that the urban informal sector performed its task quite well in 1995. A closer examination reveals some of the reasons for the sector's resilience through good times and bad.

Low capital expense and great ease of entry are basic characteristics of informal businesses.[28] Informal workers in Mexico are usually self-employed or one of just a few workers, including the owner-employer, in a small enterprise. Most are in retail trade or services. Those who are classified as manufacturers are usually making food and beverages or garments, activities requiring skills possessed by many household workers.[29] Often they are in family operations with members of the family working for no wage or salary, and family and business finances are intermingled.

Surveys in Mexico have found that 60 percent of informal businesses have no fixed address outside the home, and more than 80 percent borrowed no money to finance their operations. The life of the business tends to be quite short, particularly for the smallest firms, and business incomes are low.[30] Wages also are low and fringe benefits are minimal or nonexistent. To the extent that they evade required labor laws, registration requirements, and often taxes as well, informal enterprises can be considered illegal.[31] The main safety net against failure in an informal enterprise is that low legal, technical, and financial barriers make it relatively easy for a new one to be started.

Definitions. For the purpose of measurement, the urban informal sector has been variously defined as the self-employed and workers in firms with five or fewer employees; self-employed, unpaid workers, and domestics; unpaid workers and those making less than the minimum wage; workers not insured with social security; and workers in businesses not registered with Mexico's Tax Bureau, to name just a few. Of recent estimates of relative size of the urban informal sector, the lowest is 20.3 percent of urban employment (1993). The definition of the sector in this case is simply "employed in businesses not registered with the Tax Bureau."[32] The highest is 54.0 percent of urban employment (1995), where the definition includes all own-account workers (excluding administrative workers, professionals, and technicians), unpaid family workers, and employers and employees working in establishments with fewer than 5 or 10 persons engaged, depending on available information. Paid domestic workers were excluded.[33]

The 1993 System of National Accounts recommended by the United Nations adopted a standardized definition of the informal sector put forth by the Fifteenth International Conference of Labour Statisticians in that same year. There, "informality" is defined in terms of characteristics of the enterprise in which a person works rather than in terms of the characteristics of the person or the job. Informal enterprises are defined as household operations, with household finances and business finances virtually indistinguishable from one another. To rule out certain household enterprises that clearly don't belong in the informal sector, a requirement also was established that there be some type of nonregistration with proper governing bodies, of either the enterprise or its employees, and that there be a maximum size. The actual maximum size was not specified, leaving some flexibility for national institutional differences.[34] Using those criteria, the 1998 Survey of Micro-enterprises in Mexico determined that 29.5 percent of total nonfarm employment was in the informal sector.[35]

Indications are that productivity in the informal sector is quite low. A 1980 study estimated that the urban informal sector accounted for only 10.4 percent of Mexican gross domestic product.[36]

In the United States in 1996, the self-employed (including the incorporated self-employed) constituted 10.5 percent of civilian employment; in Mexico the comparable proportion was 28.7 percent.[37] In Mexico, in 1996, 50.4 percent of the nonfarm employed labor force worked in establishments with five or fewer employees.[38] No direct comparison with the United States is possible. However, in 1996, in the United States only 14.9 percent of nonfarm employment covered by unemployment insurance was in establishments with nine or fewer employees. For those in establishments with four or fewer, the number was 6.5 percent.[39] Virtually all U.S. workers are covered by the unemployment insurance program except for the self-employed and railroad workers. Assuming that all the self-employed—who were 9.6 percent of the total employed outside agriculture in 1996—were working in establishments with very few, if any, employees, the percentage of workers in such small establishments remains far lower in the United States than in Mexico.[40]

The employment buffer. Table 4 reveals some of the working components of the informal sector buffer. Total employ-

Table 4. Employment in Mexico, 1991, 1993, and 1995–98

Characteristic	1991	1993	1995	1996	1997	1998
Total employment						
Total	30,534,083	32,832,680	33,881,068	35,226,036	37,359,758	38,617,511
Less urban areas	16,180,190	17,618,427	18,434,667	19,126,938	20,068,342	20,414,619
More urban areas[1]	14,353,893	15,214,253	15,446,401	16,099,098	17,291,416	18,202,892
In establishments with five or fewer employees	16,317,694	18,453,522	19,890,223	20,253,492	21,152,983	21,717,240
In establishments with six or more employees	14,216,389	14,379,158	13,990,845	14,972,544	16,206,775	16,900,271
Without any employment benefits	18,530,101	20,908,139	22,042,368	22,673,196	24,686,705	24,399,054
With some employment benefits	11,739,761	11,676,699	11,536,046	12,332,697	12,356,412	13,963,520
Covered by social security[2]	11,015,583	11,318,250	10,963,583	11,365,917	12,277,333	13,264,083
Covered by social security[3]	10,545,898	10,657,482	10,567,948	11,035,109	11,184,431	12,558,402
Self-employed	9,612,380	10,129,526	10,045,405	10,115,284	10,879,739	10,961,622
In agriculture, forestry, hunting, or fishing	8,189,759	8,842,774	8,378,344	7,921,686	9,020,277	7,817,369
Percentage of total employment:						
Less urban areas	53.0	53.7	54.4	54.3	53.7	52.9
More urban areas[1]	47.0	46.3	45.6	45.7	46.3	47.1
In establishments with five or fewer employees	53.4	56.2	58.7	57.5	56.6	56.2
In establishments with six or more employees	46.6	43.8	41.3	42.5	43.4	43.8
Without any employment benefits	61.2	64.2	65.6	64.8	66.6	63.6
With some employment benefits	38.8	35.8	34.4	35.2	33.4	36.4
Covered by social security[3]	34.8	32.7	31.5	31.5	30.2	32.7
Self-employed	31.5	30.9	29.6	28.7	29.1	28.4
In agriculture, forestry, hunting, or fishing	26.8	26.9	24.7	22.5	24.1	20.2

	1991–98	1991–93	1993–95	1995–98
Annual percentage change				
Total	3.4	3.7	2.6	4.5
Less urban areas	3.4	4.3	2.3	3.5
More urban areas[1]	3.5	3.0	.8	5.6
In establishments with five or fewer employees	4.2	6.3	3.8	3.0
In establishments with six or more employees	2.5	.6	–1.4	6.5
Without any employment benefits	4.0	6.2	2.7	3.4
With some employment benefits	2.5	–.3	–.6	6.6
Covered by social security[2]	2.7	1.4	–1.6	6.6
Covered by social security[3]	2.5	.5	–.4	5.9
Self-employed	1.9	2.7	–.4	3.0
In agriculture, forestry, hunting, or fishing	–.7	3.9	–2.7	–2.3

[1] Areas with 100,000 or more inhabitants.

[2] From the Social Security Institute statistics on covered employees.

[3] From the National Employment Survey.

Note: Absolute and relative data for employees with social secrity and employment benefits excludes "employed" persons waiting to start a new job.

Source: INEGI, National Employment Survey, various years, *Cuaderno de Información Oportuna*, various years, (Social Security Institute statistics).

ment actually rose from 1993 to 1995, while gross domestic product and consumption fell. The rise was greater in the less urban areas than in those more urbanized. It was greater still among employees with no employee benefits, and greatest of all among workers in establishments with five or fewer employees.[41] Employment fell among those with some employment benefits, particularly those covered by social security as recorded by the Social Security Institute. Except for the fact that self-employment declined slightly, the image that emerges is that of the informal sector shoring up the employment situation during an economic downturn. The indicators of informal employment generally rose faster than did employment overall, while indicators of formal employment were all falling. Employment in establishments with six or more employees, among those with some employment benefits, and among those covered by social security all declined at an annual rate of between 1 percent and 2 percent.

Migration. Migration to the United States may have played some role in keeping the unemployment rate from rising any higher than it did.[42] The U.S. economy was in the middle of an expansion and the fall in the peso made U.S. wages all that much more attractive. Even so, if emigration had been the entire explanation, overall employment in Mexico would not have continued to rise.

Agricultural employment. That the employment situation was so much better in 1995 in the less urban areas than in the more urban areas cannot be attributed to agriculture. Employment rose in spite of, rather than because of, what was going on with agricultural employment. The fluctuations in agricultural employment in the time period under observation appear to be so capricious that one must look to other explanations such as flaws with the data collection—in this more difficult data-collection area—or changes in agricultural policy designed to replace subsistence farming with more competitive market farming. One explainable anomaly is the large increase in agricultural employment in 1997, which occurred because the survey that year for rural areas was late, extending into the third quarter, and it captured a large number of seasonal agricultural workers who had not been counted in other years.

Nonagricultural employment. In table 5, agriculture is removed from the picture, which greatly clarifies the situation. The growth of employment during the 1993–95 period is much more pronounced in the less urban areas, in small establishments, and among workers without employment benefits. Furthermore, the apparent anomaly of declining self-employment in the period is eliminated. Nonagricultural self-employment rose even more than did nonagricultural employment in establishments with five or fewer employees.

Informal sector ups and downs. The disproportionate growth in the indicators of informality, except for self-employment, can also be seen from 1991 to 1993, a period when real gross domestic product grew at an annual rate of 2.8 percent. (See table 5.) After the across-the-board relative growth of informal sector indicators from 1993 to 1995, the trend reversed during the 1995–98 period when real gross domestic product grew at a robust 5.6-percent annual rate. Employment in small establishments, employment without any benefits, and self-employment all grew more slowly than did employment overall. The small exception is that the formal indicator of "covered by social security" grew slightly more slowly than did overall employment.

The change in the trend since 1995 was not enough to prevent informal indicators from growing faster in general than overall employment during the 1991–98 period. The one exception here is "self-employment," which grew slightly less.

Legislated reform. Social security participation might have been influenced by a reform in social security that was enacted in December 1995 and went into effect in July 1997. The reform, among other things, increased the length of participation (working in a job with mandatory social security contributions) from 500 weeks to 25 years to qualify for eventual retirement benefits. It also slightly increased the guaranteed minimum benefit at retirement while strengthening the link between workers' contributions and benefits. In Mexico, the social security system also includes health benefits, and reforms in that aspect of the system might be most significant. The contributions required of employers were substantially reduced and it became easier for those in the informal sector to participate voluntarily in the social security program.

The continued fall in the proportion of the workers participating in social security in 1996 and 1997 (which can be seen in the percentage of the total column in table 5) might reflect anticipation of the changes. In particular, the common practice of leaving the system after the required 500 weeks of participation may have accelerated briefly. The small surge in 1998, then, might reflect an end of that practice as workers became locked into the new 25-year participation requirement. It might also reflect new participants taking advantage of what is, overall, a more attractive program, a program that is also specifically aimed at reducing the size of the informal sector.[43]

Two Mexicos

Measured unemployment is lower and the indicators of informality are greater in Mexico's less urban than in its more urban areas. In 1991, the rate of unemployment, at 2.4 percent, was only slightly lower in the former than in the latter.

Table 5. Nonagricultural employment in Mexico, 1991, 1993, and 1995–98

Characteristic	1991	1993	1995	1996	1997	1998
Total employment						
Total	22,344,324	23,989,906	25,502,724	27,304,350	28,339,481	30,800,142
Less urban areas	8,281,632	8,972,820	10,237,264	11,425,846	11,309,325	12,758,557
More urban areas[1]	14,062,692	15,017,086	15,265,460	15,878,504	17,030,156	18,041,585
In establishments with five or fewer employees	10,418,191	11,656,595	12,974,490	13,755,124	14,090,457	15,244,503
In establishments with six or more employees	11,926,133	12,333,311	12,528,234	13,549,226	14,249,024	15,555,639
Without any employment benefits	10,966,533	12,626,352	14,216,823	15,268,060	16,223,115	17,130,326
With some employment benefits	11,192,962	11,205,017	11,064,812	11,849,497	11,891,316	13,478,928
Covered by social security	10,089,206	10,234,845	10,165,702	10,615,378	10,788,994	12,148,125
Self-employed	5,669,406	5,917,838	6,644,053	6,913,796	7,307,990	7,766,943
Percentage of total nonagricultural employment:						
Less urban areas	37.1	37.4	40.1	41.8	39.9	41.4
More urban areas[1]	62.9	62.6	59.9	58.2	60.1	58.6
In establishments with five or fewer employees	46.6	48.6	50.9	50.4	49.7	49.5
In establishments with six or more employees	53.4	51.4	49.1	49.6	50.3	50.5
Without any employment benefits	49.5	53.0	56.2	56.3	57.7	56.0
With some employment benefits	50.5	47.0	43.8	43.7	42.3	44.0
Covered by social security	45.5	42.9	40.2	39.1	38.4	39.7
Self-employed	25.4	24.7	26.1	25.3	25.8	25.2

	1991–98	1991–93	1993–95	1995–98
Annual percentage change				
Total	4.7	3.6	3.1	6.5
Less urban areas	6.4	4.1	6.8	7.6
More urban areas[1]	3.6	3.3	.8	5.7
In establishments with five or fewer employees	5.6	5.8	5.5	5.5
In establishments with six or more employees	3.9	1.7	.8	7.5
Without any employmnet benefits	6.6	7.3	6.1	6.4
With some employment benefits	2.7	.1	−.6	6.8
Covered by social security	2.7	.7	−.3	6.1
Self-employed	4.6	2.2	6.0	5.3

[1] Areas with 100,000 or more inhabitants and state capitals.

NOTE: Absolute and relative data for employees with social security and employment benefits excludes "employed" persons waiting to start a new job.
SOURCE: INEGI, National Employment Survey, various years.

(See table 6.) By 1993, however, a considerable gap had opened up between them as the number of unemployed actually fell in the less urban areas, while it was rising substantially in the more urban areas. The gap widened in 1995, as the more urban areas were harder hit by the economic downturn. The gap narrowed somewhat through 1997, but then expanded slightly again in 1998. Throughout the period from 1991 to 1998, the number of unemployed grew at an annual rate of 7.7 percent in the more urban areas, while it declined in the less urban areas.

If the official unemployment rate were to be based upon a survey of the entire country and not just the more urban areas, it would be even lower than the one reported. In the 6 years during which both the National Employment Survey and the Urban Employment Survey were taken, the nationwide unemployment rate averaged 1.1 percentage points

Table 6. Mexico's unemployment in more urban areas versus less urban areas, 1991, 1993, and 1995–98

Characteristic	1991	1993	1995	1996	1997	1998
Labor force	31,229,048	33,651,812	35,558,484	36,580,746	38,344,658	39,507,063
More urban areas	14,706,007	15,705,194	16,554,068	17,052,788	17,906,946	18,793,502
Less urban areas	16,523,041	17,946,618	19,004,416	19,527,958	20,437,712	20,713,561
Open unemployed	694,965	819,132	1,677,416	1,354,710	984,900	889,552
More urban areas	352,114	490,941	1,107,667	953,690	615,530	590,610
Less urban areas	342,851	328,191	569,749	401,020	369,370	298,942
Open unemployment rate (percent)	2.2	2.4	4.7	3.7	2.6	2.3
More urban areas	2.4	3.1	6.7	5.6	3.4	3.1
Less urban areas	2.1	1.8	3.0	2.1	1.8	1.4

Annual percentage change	1991–98	1991–93	1993–95	1995–98
Labor force	3.4	3.8	2.8	3.6
More urban areas	3.6	3.3	2.7	4.3
Less urban areas	3.3	4.2	2.9	2.9
Open unemployed	3.6	8.6	43.1	–19.1
More urban areas	7.7	18.1	50.2	–18.9
Less urban areas	–1.9	–2.2	31.8	–19.3

NOTE: The "more urban areas" are those with 100,000 or more inhabitants and state capitals.
SOURCE: INEGI, National Employment Survey, various years.

lower than this urban rate.[44] Applying that difference to the entire period yields a national average unemployment rate of 2.6 percent from 1991 to 1999 (unadjusted to U.S. concepts). Employment in general is more likely to be informal in the less urban areas. The following tabulation shows informal employment indicators, by percent of total area employment, in 1998.[45]

	*More urban areas**	*Less urban areas*
Not covered by social security	53.2	87.1
Without any employee benefits	48.1	77.4
In establishments with five or fewer employees	42.7	68.3
Self-employed	22.9	33.2
Unpaid workers	4.9	4.5
Domestic workers	4.8	4.5

*100,00 or more inhabitants and state capitals.

Two types of work often counted as informal—unpaid and domestic labor—have been added to the indicators. Except for domestic workers (a very small category) the measures of informality for the less urban areas are far higher than those for the more urban areas.

In some of the poorer and more rural states, the percent of the population covered by social security is less than a third as great as the percent covered in richer states. Following is the percent of population covered by social security in 1995.[46]

	Percent
Northern states	
Coahuila	75.4
Nuevo Leon	72.1
Sinaola	58.1
Pacific region	
Jalisco	49.2
Poorer states in South and interior	
Puebla	33.3
Guerrero	34.1
Oaxaca	24.4
Chiapas	23.5

As noted previously, unemployment in Mexico appears to be something that only those with some economic comfort can afford. The unemployed are also better educated than average. (See table 7.) In 1995, chosen because it was the year of highest unemployment in the period, the phenomenon can be observed in both the more urban and the less urban areas. Unemployment is not only lower for the generally less educated, but it is also lower in every education category in the less urban than in the more urban areas.

The highest unemployment rate observed for any education category was 8.3 percent, the rate of those with incom-

Table 7. Labor force and unemployment in Mexico, by education, more urban areas versus less urban areas, 1995

Education	All			More urban areas			Less urban areas		
	Percent of total		Unemployment percentage rate	Percent of total		Unemployment percentage rate	Percent of total		Unemployment percentage rate
	Labor force	Unemployment		Labor force	Unemployment		Labor force	Unemployment	
Total	100.0	100.0	4.7	100.0	100.0	6.7	100.0	100.0	3.0
No education	10.8	4.4	1.9	4.1	3.3	5.5	16.7	6.5	1.2
Incomplete primary	20.9	14.2	3.2	11.3	8.9	5.3	29.2	24.4	2.5
Complete primary	21.4	18.2	4.0	19.6	16.5	5.6	22.9	21.6	2.8
Complete and incomplete high school	27.9	39.6	6.7	35.1	43.3	8.3	21.6	32.5	4.5
More than high school	19.0	23.6	5.9	29.8	28.0	6.3	9.5	15.1	4.8

NOTE: The "more urban areas" are those with 100,000 or more inhabitants and state capitals.
SOURCE: INEGI, National Employment Survey, 1995, table 9.

plete or complete high school education in the more urban areas. The next highest was 6.3 percent, the rate for those with more than a high school education in the more urban areas. The lowest two rates, 1.2 and 2.5 percent, were for those with no education and incomplete primary education, respectively, in the less urban areas.

Demonstrating further the contrast between the regions, the labor force was more concentrated among the better educated in the more urban areas, where 64.9 percent had at least some high school education, and among the less educated in the less urban areas. In the less urban areas, only 31.1 percent of the labor force had at least some high school education, while 16.7 percent had no education at all, more than four times as great a percentage as the 4.1 percent in the more urban areas. The greater concentration of workers among the better educated tended to raise the average unemployment rate in the more urban areas, while the concentration of workers among the lesser educated, who are also predominant in the informal sector, lowered the average unemployment rate in the less urban areas.

Segmented market versus flexible wages

An alternative explanation has been extended for the relative rigidity of employment and unemployment in Latin America in the face of an economic decline. Instead of unemployment going up as it does in the United States, the main adjustment is a fall in real wages. Real wages can be reduced more easily in Latin America partly because of high rates of inflation. To reduce real wages, employers need only to hold the line on nominal wages or raise them at lower rates than the rate of inflation.[47]

Indeed, the consumer price index (CPI) in Mexico went up by almost a third in the first 6 months of 1995, and, as noted previously, real wages plunged after having gone up steadily since 1988.[48] The real wage aspect of the alternative theory of rigid employment holds true, then, for the country's most recent economic shock, as it did previously for a protracted period after the financial crisis touched off by falling oil prices in 1981. On the employment side, however, the alternative explanation holds true mainly just for the informal sector. Table 4 shows that all the indicators for formal employment declined from 1993 to 1995. Had a National Employment Survey been taken in 1994, a steeper decline would no doubt have been revealed. Declining real wages, which permit employers to lower costs when revenues are falling without laying off employees, probably somewhat mitigated the reduction in formal employment.

The existence of a large informal sector in other large Latin American countries might explain the downward rigidity of employment in those countries almost as well as it does in Mexico. In 13 Latin American countries, urban informal sector employment averaged 47 percent of total urban employment, according to estimates by the International Labor Office in the mid-1990s. These countries include Argentina at 46 percent and Brazil at 48 percent.[49]

Maquiladoras and export-led growth

The relative expansion of the informal sector in Mexico would have been even greater in the 1990s than it was had it not been for the growth of Mexico's in-bond manufacturing system. Begun in 1965, the *maquiladora* program, as it is called, takes advantage of a provision in U.S. trade law that provides for import duties to be paid only upon the value added to U.S. components. Most *maquiladoras* are subsidiaries of large multinational corporations assembling finished products from components received primarily from the United States. *Maquiladora* employment has increased every year since 1982.[50]

Even with the steady increase, *maquiladora* employment

still constitutes only 2.6 percent of total employment and 14.6 percent of manufacturing employment. Including indirect employment generated by *maquiladoras* would, of course, raise both proportions. But because most of these firms' backward and forward product linkages, as well as their financial linkages, are with the exterior, the rise would have been very small.[51]

Regarded not as an anomalous enclave in Mexico's economy, but as representative of a larger phenomenon, the growth of *maquiladora* employment takes on added importance. Since the beginning of the North American Free Trade Agreement and the fall of the peso in 1994, exports in general from Mexico have soared. In 1998, $64.4 billion in merchandise was exported from non-*maquiladora* plants versus $53.1 billion from *maquiladora* plants. From 1994 through 1998, non-*maquiladora* exports grew annually by $14.1 billion while *maquiladora* exports grew by $7.4 billion annually. From 1991 through 1994, non-*maquiladora* exports grew only by $2.5 billion annually versus *maquiladora* export growth of $3.5 billion annually. Altogether, in current U.S. dollar terms, exports grew at the extraordinary annual rate of 17.9 percent from 1994 through 1998.[52]

The direct jobs created by these exports are not in the informal sector. Workers in manufacturing for export are typically wage and salary workers, they work in establishments with more than five employees, and most receive fringe benefits of some kind. A continuation of this rate of export-led growth would, in due time, effect large changes in Mexico's labor structure.

Virtuous circle

Commentators on Mexico at the OECD wrote hopefully in 1996:

> The way forward is to introduce a range of measures that would favour formal activity. With the shift from informality to formal activity, the tax base would increase; this in turn would allow a reduction in tax rates without weakening the position of public finances, and/or improved delivery of services to workers and firms in the formal sector, thereby strengthening incentives to switch to formal activity.[53]

They refer to it as a "virtuous circle."

Mexico did move forward in the 8 years under consideration in terms of job creation. Employment grew at an annual percentage rate of 3.4 percent from 1991 to 1998. By this measure, Mexico compares very favorably with the United States and Canada, which had annual growth rates in employment of 1.6 percent and 1.5 percent, respectively, during the period. Mexico's compares even more favorably with those of such countries as the United Kingdom (0.8 percent) and Japan (0.3 percent).[54] It would also appear that Mexico is more than meeting its growing requirement for jobs, because the annual rate of growth of the working age population was 2.5 percent.[55] Even the number of employed persons covered by social security and employees in establishments with six or more employees grew at least that fast.

Alhough overall employment may have grown, the "virtuous circle" remained elusive. Two of the three main indicators of informal employment, "in establishments with five or fewer employees," and "without any employment benefits," grew at a much greater annual rate than did employment generally. If agriculture is excluded, the trends are even more pronounced for these indicators, and self-employment grew at a faster rate than overall employment as well. Informal employment was apparently a more dominant factor in Mexico in 1998 than in 1991. The economic downturn in 1995 played a large part in these developments, but it only accelerated a trend that was recognizable from 1991 to 1993.

Since 1995, however, most indicators of formal employment relative to total employment have grown. Three factors help explain these changes: recovery from the disproportionate effect of the economic downturn on the formal sector, a substantial rise in exports, and reforms in the social security system. It remains to be seen whether this is the beginning of a long-term trend in Mexico away from informal sector employment or only a brief interruption of a trend in the opposite direction. □

Notes

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[1] A great deal has been written about the informal sector in developing countries since British anthropologist, Keith Hart, coined the term in 1970. See his "Small-Scale Entrepreneurs in Ghana and Development Planning," *The Journal of Development Studies*, April 1970, pp. 104–20, and "Informal Income Opportunities and Urban Employment in Ghana," *Journal of Modern African Studies*, January 1973, pp. 61–89 (reprinted in several readers). Revealing the widespread current acceptance of the concept, the International Labour Office included "urban informal sector employment" among the 18 indicators in its new reference work, *Key Indicators of the Labour Market, 1999* (Geneva, International Labour Office, 1999). For important contributions to what they describe as the "immense" literature on the informal sector see note 2 in Donald C. Mead and Christian Morrison, "The Informal Sector Elephant," *World Development*, October 1996, pp. 1611–19.

[2] Real wages in manufacturing were still 20 percent below their 1994 level as of September 1998. The 1998 average of real wages in retail trade was 15 percent below, and of wholesale trade was 21 percent below, the 1994 average. Manufacturing real wages are from *OECD Economic Surveys, Mexico, 1998–1999* (Paris, Organization for Economic Cooperation and Development, 1999), p. 32. The yearly averages for real wages in trade are calculated from INEGI, *Cuaderno de Información*

Oportuna, September 1999, table 2.27.

[3] To receive no employee benefits at all means that the worker gets no end-of-year bonus, paid vacation, profit sharing, social security (IMSS), civil servants' social security (ISSSTE), saving system for retirement (SAR), housing allowance, medical or health benefits, or any other fringe benefit that he or she might volunteer to the interviewer.

[4] A small establishment might be a retail outlet of a chain of stores or the local office of a larger organization. It could be a well-capitalized small operation that pays its workers well and scrupulously abides by all the labor and the tax laws. A self-employed person could be a doctor, lawyer, engineer, or some other type of highly skilled and well-paid contractor. Even someone with no employment benefits could be a member of the professional class and quite far from what is generally understood as the informal sector.

[5] This assumption may not be entirely valid with respect to employment benefits because of changes in the social security program in 1997, discussed later in the article.

[6] Susan Fleck and Constance Sorrentino, "Employment and Unemployment in Mexico's Labor Force," *Monthly Labor Review*, November 1994, pp. 3–31.

[7] Calculated from the open unemployment rate in table 3.

[8] Bureau of Labor Statistics, "Comparative Civilian Labor Force Statistics, Ten Countries, 1959–1999," April 17, 2000, table 2, **http://stats.bls.gov/special.requests/ForeignLabor/flsflorc.pdf** (visited Nov. 13, 2000).

[9] Fleck and Sorrentino, pp. 12–16.

[10] Unlike Mexico's survey, the U.S. survey has no question that directly asks if the respondent is waiting to start a new job. Rather, those answering that they have a job but also respond that they did not work in the past week are asked why they did not work. If they reply they were waiting to start a new job, they are potentially counted as unemployed. They are dropped from the labor force and not counted as unemployed unless they respond positively to an additional question concerning whether or not they actively sought work in the past 4 weeks.

[11] Employed persons in Mexico are defined as those who are 12 years old or older and, in the reference week (the week prior to their interview), (1) worked at least one hour for barter or money or were self-employed; or (2) did any work at all as an unpaid family or nonfamily worker; or (3) were temporarily absent from work because of illness, vacation, travel, personal reason, or studies and were *paid* while on leave (no time limit is placed on the absence as long as the person is paid); or (4) did not work or receive pay, but expected either to begin a new job or to return to work within the next 4 weeks. The unemployed are defined as persons 12 years old and older who, in the reference week, did not work for 1 or more hours or do any unpaid family work and (1) were available for work and actively sought work in the previous 4 weeks or (3) had sought work in the past 1-2 months and were waiting (a) for the next season to begin or (b) for a reply to a job application; or have intentions to call upon potential employers within the next few days. The sum of the employed and the unemployed, in Mexico as elsewhere, is the labor force, though in Mexico it is called the economically active population, consistent with the terminology of the International Labour Organization.

[12] The reported unemployment rates from which adjustments are made differ somewhat from the unemployment rate in table 3 even though only urban areas are considered in each case. That is because the numbers come from the two different major household surveys, and the so-called "more urban areas" of the National Employment Survey include additional cities to those covered by the Urban Employment Survey. (See the appendix.) Another reason why they differ is that the National Employment Survey, also noted in the appendix, is a snapshot taken in the second quarter of the given year whereas the Urban Employment Survey annual number is an average of the results of twelve monthly surveys.

[13] The Mexican questionnaire asks for the dates when the job search began and when the respondent last sought work. The interviewer is urged to make sure that the search has been uninterrupted between the two dates. This is one of the factors considered to determine if the search is serious even though the respondent might not have sought work in the past 4 weeks. Some other factors considered are if they are awaiting a response to a job solicitation or if they are recuperating from an illness.

[14] The published tables of the National Employment Survey break at 12 through 14 years old instead of 12 through 15, so the precise effect of including all four year-age groups cannot be calculated with readily available data.

[15] When gross domestic product fell by 0.5 percent in 1991, the U.S. rate of unemployment rose to 6.8 percent, from 5.6 percent the previous year. Total employment fell by 0.9 percent. Before that, in 1982, a drop in GDP of 2.0 percent had resulted in an unemployment rate of 9.7 percent, up from 7.6 percent the previous year. Total employment fell by 0.9 percent then, as well. GDP numbers are from Bureau of Economic Analysis, National Income and Product Accounts, **http://www.bea.doc.gov/bea/dn/gdplev.htm** (visited Nov. 13, 2000); unemployment statistics are from "Comparative Civilian Labor Force Statistics, Ten Countries, 1959–1999," table 2.

[16] The relatively low continuing unemployment for 1995 is apparently not a result of the fact that the National Employment Survey, which produced the statistics referred to here, is taken only in the second quarter of the year. The average unemployment for the year from the Urban Employment Survey, as observed in table 3, was 6.3 percent. That survey reported an unemployment rate of 6.5 percent in the second quarter. These are both lower than the unadjusted "snapshot" rate of 6.7 percent rate of the more urban areas in the National Employment Survey. See *Cuaderno de Información Oportuna*, March 1996, table 2.1, for quarterly unemployment rates in 1995.

[17] For a more complete discussion of what each rate measures, see the Fleck-Sorrentino article. The R-1 definition has changed slightly. Anyone out on strike is now considered employed. Previously, a striking worker was considered employed only if he or she expected to return to work in less than 4 weeks. Another alternative rate described in Fleck and Sorrentino has been discontinued.

[18] U.S. data are from "Comparative Civilian Labor Force Statistics, Ten Countries, 1959–1999," table 7. "Agriculture," in each case, is defined as "agriculture, forestry, hunting, and fishing."

[19] *World Development Indicators, 1999*, The World Bank (Washington, DC, 1999), table 2.2.

[20] Bureau of Labor Statistics press release, September 7, 2000, "International Comparisons of Hourly Compensation Costs for Production Workers in Manufacturing, 1999, Supplementary Tables," table 4.

[21] Mexico's per capita measured at current exchange rates was only 12 percent of U.S. GDP per capita, reflecting, to a degree, the plummet in the value of the peso beginning in late December 1994. For a full treatment of the peso crisis and its aftermath, see *OECD Economic Surveys, Mexico, 1994–1995* (Paris, Organization for Economic Cooperation and Development, 1995). The per capita GDP comparisons are from their *OECD Economic Surveys, 1998–1999*, basic statistics, international comparisons, unnumbered fold-out page.

[22] *World Development Indicators, 1999*, table 2.8. The Gini index, given in the cited table, is a measure of income inequality. On a scale from 0 to 100, 0 represents perfect income equality and 100 complete income inequality. In 1995, the Gini index in Mexico was 53.7; in 1994, the Gini index in the United States was 40.1.

[23] An alternative to unemployment compensation was initiated in 1992, however, with the creation of the SAR (individual accounts for retirement), a pension fund program in addition to Mexico's social security program administered by private banks. Deposits in the SAR can be drawn upon during periods of unemployment, but only after one has contributed for 5 years, so it would not have come into play during the period under study. The sums provided are also very small.

[24] In the case of collective dismissals for routine economic reasons, employers are required by law to pay a lump-sum equivalent of three months wages to all dismissed workers plus a seniority premium of 12 days of salary per year of employment with that employer, with a ceiling of two minimum wages. In the case of individual dismissals without a very strictly defined "just cause," an additional 20 days of salary per year is added to the above if the worker has more than 15 years of service. Additional severance requirements may be part of collective agreements. *OECD Economic Surveys, 1996–1997*, p. 98.

[25] *OECD Economic Surveys, 1996–1997*, p. 96.

[26] *OECD Economic Surveys, 1996–1997*, pp. 100–01.

[27] *OECD Economic Surveys, 1996–1997*, pp. 64–65.

[28] Low capital intensity, small size, and illegality to one degree or another, were the three measures for informality used by Mead and Morrison, op. cit., in their seven-nation study. They found a good deal of variability among the countries, none of which was Mexico, in the degree to which these features intersected. They conclude that the term, "informal sector," may be appropriate for examining an individual country, but definitional problems make multicountry comparisons difficult.

[29] A 1996 analysis from the Urban Employment Survey of microenterprises (6 or fewer employees) found that 33 percent of such firms defined as "informal" were in commerce, 33 percent in services, and 23 percent in manufacturing. The remainder was in an "other" category that includes construction and transportation. Informal microenterprises were 72 percent of all manufacturing firms, 58 percent of service firms, and 51 percent of commercial firms. See Ricardo Rodarte, "*Experiencias en la medición del sector informal en Mexico,*" INEGI, *Notas, Revista de Información y Analysis*, no. 5, 1998, p. 22.

[30] Fleck and Sorrentino, pp. 13–14. Reports of generally low incomes must be regarded with some reservation, however. Underreporting of income to survey takers and tax collectors alike is likely to be greater in the informal sector.

[31] See Nestor Elizando,"Illegality in the Urban Informal Sector of Mexico City," in Victor E. Tokman, ed., *Beyond Regulation, The Informal Economy in Latin America* (Boulder and London, Lynne Reinner Publishers, 1992), pp. 55–83. Although labeled "illegal," the term does not include criminal, underworld activities as commonly understood in the United States.

[32] *OECD Economic Surveys, 1996–1997*, p. 73. See also Fleck and Sorrentino, p. 12, for a collection of earlier estimates.

[33] *Key Indicators of the Labor Market*, pp. 180 and 186.

[34] More details are in Ralf Hussmannns and Farhad Mehran, "Statistical definition of the informal sector: International standards and practices," 52nd session of the International Statistical Institute, Helsinki, Finland, August 9–18, 1999. Further information may be found at **http://www.stat.fi/isi99/proceedings/arkisto/varasto/huss0772.pdf** (visited Nov. 7, 2000).

[35] INEGI letter, May 11, 2000. The wide discrepancy between this figure and the much higher percentage of employed persons receiving no fringe benefits of any kind, the Institute points out, bespeaks a flexibility in labor relationships in Mexico that is not so well captured by the "formal vs. informal" dichotomy. Workers paid by the job on a contract basis by formal enterprises could account for a substantial part of this discrepancy.

[36] Clara Jusidman, *The Informal Sector in Mexico*, Occasional Paper Number 1, prepared for the U.S. Department of Labor and Secretariat of Labor and Social Welfare of Mexico, September 1992, p. 19. A Spanish version of this report was also published as *El Sector informal en Mexico* (Mexico City, Secretaria del Trabajo y Previsión Social, Subsecretaria "B," 1993). Jusidman refers simply to a study by INEGI for her 10.4 percent figure, but no indication is given as to what definition of the informal sector was used. By any definition of Mexico's informal sector that has been offered, this percentage is much lower than the percentage of employment in the informal sector.

[37] The U.S. percentage is from Marilyn E. Manser and Garnett Picot, "The role of self-employment in U.S. and Canadian job growth," *Monthly Labor Review*, April 1999, p. 16. Official U.S. statistics for self-employment exclude the incorporated self-employed. Mexican statistics include them. The U.S. percentage here is in accord with Mexico's definition. The Mexico percentage is presented in table 4 of this article. Mexico tabulates workers on their own account separately from owner-employers. The two are combined here, consistent with the International Labour Office definition of self-employed. Owner-employers were 4.8 percent of total employed workers in Mexico in 1996. The United States includes both those without paid employees (own-account workers in Mexico) and those with employees in its definition of self-employed. Removing high-income professionals from the self-employed would probably make the disparity between the two countries even greater. On the other hand, when commentators speak of the "informal" sector, they often mean only the urban informal sector, as opposed to the "traditional" or "subsistence" agriculture sector. If Mexico's many small family farms were to be excluded from this measure, the disparity between the countries would be somewhat reduced. The self-employed were 25.3 percent of total nonagricultural employment in Mexico in 1996 (table 5) and 7.4 percent of U.S. nonagricultural employment in the same year (Bureau of Labor Statistics, *Employment and Earnings*, March 1997, Table A-6). Assuming the incorporated self-employed were the same percentage of nonagricultural self-employed as of the total self-employed, 9.5 percent of nonagricultural workers in the United States would have been self-employed by Mexican concepts.

[38] See table 5. More workers are in establishments of small size than in firms of small size because an establishment can be a part of a larger organization. That is why this percentage is greater than previous estimates of informality based upon firm size.

[39] Bureau of Labor Statistics, *Employment and Wages, Annual Averages, 1996*, table 9. Neither the household nor the establishment surveys for the United States break down employment by establishment size.

[40] Manser and Picot, p. 16, for U.S. nonagricultural self-employed.

[41] As stated earlier in note 3, to receive no employee benefits at all means that the worker gets no end-of-year bonus, paid vacation, profit sharing, social security (IMSS), civil servants' social security (ISSSTE), saving system for retirement (SAR), housing allowance, medical or health benefits, or any other fringe benefit that he or she might volunteer to the interviewer. One could hardly find a better definition of a member of the informal sector. As far as the small scale of operations is concerned, it would have been better to have statistics on those working in firms, as opposed to establishments, with five or fewer employees, but these numbers are not readily available.

[42] Net emigration from Mexico to the United States from 1990 to 1995 is estimated at 1.39 million. The Mexican-born population living in the United States is estimated to have increased 1.9 million from 1990 to 1996. See *Binational Study on Migration between Mexico and the United States*, Commission on Immigration Reform, United States, and Ministry of Foreign Affairs, United Mexican States, 1997, p. iii.

[43] See *OECD Economic Surveys, 1996–1997*, pp. 120 and 151; *1997–1998*, pp. 71–81, and 88–119; *1997–1999*, pp. 118–21; Marco A. Espinosa-Vega and Tapen Sinha, "A Primer and Assessment of Social Security Reform in Mexico," *Economic Review*, First Quarter, 2000 (Federal Reserve Bank of Atlanta), pp. 1–23. Espinosa-Vega and Sinha note (pp. 3–4) that the retirement benefit increase, on average, was so small for those contributing past the 10th year of work that the incentive was quite strong to drop out or evade payments into the old program after the 10-year mark had been reached.

[44] Calculated from differences in open unemployment rates in tables 3 and 6.

[45] Data are from INEGI, National Employment Survey, 1998, tables 3.28, 3.30, 3.39, 3.53

[46] Data are from *OECD Economic Surveys, Mexico, 1997–1998*, p. 96.

[47] See Jose Antonio González Anaya, "Labor Market Flexibility in Thirteen Latin American Countries and the United States, Revisiting and Expanding Okun Coefficients" (Washington, DC, The World Bank, 1999).

[48] The 1995 CPI changes are from *Cuaderno de Información Oportuna*, May 1997, table 3.1; additional real wage observations are from *OECD Economic Surveys, 1996–1997*, pp. 87–91.

[49] *Key Indicators of the Labour Market*, pp. 179–80. These are the same thirteen countries as were examined in the González Anaya study.

[50] INEGI, *Industria Maquiladora de Exportación*, February 2000, p. 8.

[51] *OECD Economic Surveys, 1996–1997*, p. 92.

[52] *Cuaderno de Información Oportuna*, December 1996, table 4.6; March 1997, table 4.8; and December 1999, table 4.8.

[53] *OECD Economic Surveys, 1996–1997*, p. 9.

[54] "Comparative Civilian Labor Force Statistics, Ten Countries, 1959–1999," table 2.

[55] INEGI, National Employment Survey, 1998, table 2.2.

Appendix: The surveys

The *Instituto Nacional de Estadística, Geografía e Informática* (INEGI), created through a governmental reorganization in 1983, introduced the National Employment Survey in 1988. This was the first generally reliable household survey of employment representative of the nation as a whole. The survey and the published results, from the beginning, have been probing and thorough, revealing a wide range of characteristics of Mexico's labor market.The primary shortcoming in these beginning years was that the survey was not conducted regularly. The next National Employment Survey wasn't made until 1991. After that, surveys were taken in 1993 and 1995. Since 1995, the surveys have been conducted annually.

From the beginning, the National Employment Surveys have been conducted only in the second quarter of the year. Because of differences in the questionnaire and sample design in all but the largest urban areas, 1988 lacks comparability with the later years. That leaves only the period from 1991 to 1998 for a relatively clear, consistent picture of overall employment in Mexico.[1]

For larger urban areas only, labor information has been more readily available for a longer period. The Urban Employment Survey was initiated in 1983 covering 12 cities on a quarterly basis. It first overlapped with and then replaced the Continuous Occupational Survey, which for most of the years of its existence had covered only the three largest cities, Mexico City, Guadalajara, and Monterrey. In 1985 the survey questionnaire was revised and enlarged and the coverage was expanded to 16 cities. Since 1987, this survey has been conducted on a monthly basis. Coverage jumped to 34 cities by the end of 1992, and, with subsequent regular increases, now stands at 45 cities.

The expanding coverage of the Urban Employment Survey makes comparisons over time somewhat problematic, but the benefits outweigh this disadvantage.[2] Observers now are able to trace on a monthly basis a number of labor market indicators for individual cities, cities that previously were statistically invisible; the monthly aggregates are more truly representative of the entire country than before, particularly the measures of the rate of unemployment; and because the Urban Employment Survey has never been more than a partial view of labor in the country, the lack of comparability over time is of lessened consequence. If one wants to know what is happening, for instance, to overall employment or to the overall labor force over time, then the National Employment Survey still must be consulted.

Note that the National Employment Survey itself is divided into "more urban" and "less urban" areas. The relatively stable "more urban" portion should not be confused with the Urban Employment Survey with its steadily expanding coverage. The more urban coverage of the National Employment Survey, throughout the period, consists of the coverage of the Urban Employment Survey plus additional areas of "high population density." Those additional areas are cities with a population of 100,000 or more and state capitals, whether or not they meet the 100,000-person minimum. Employment in the more urban areas, as defined, ranged from a high of 47.0 percent of total national employment in 1991 to a low of 45.6 in 1995.

Notes to the appendix

[1] A new questionnaire was introduced in 1995, and there is one modification that is most noteworthy. Previously, persons on strike were counted as employed, but only if they expected to return to work within 4 weeks. Under the revised system, anyone on strike is counted as employed. This also conforms with the practice in the United States. Because virtually no striking worker expects to stay out on strike for more than 4 weeks, this change should have a minimal effect on the final employment or unemployment figures.

[2] With the expanded coverage, official unemployment has been consistently lower by about one-tenth of a percentage point than would have been the case had the survey continued to cover only 16 cities. (The information on the 16-city rate was obtained from an e-mail from INEGI, May 11, 2000. The official unemployment rate is from table 3 of this article.)

Income distribution of older Americans

Although remaining concentrated in lower income groups, elderly households achieved significantly greater equality of income distribution between 1967 and 1997; the gap with the income distribution of nonelderly households narrowed

Rose M. Rubin, Shelley I. White-Means, and Luojia Mao Daniel

Although many older Americans are financially comfortable, with a significant group being well off, the largest share of elderly (defined as persons aged 65 or older) households has low incomes. Income inequality among older households persists despite more than 30 years of growth of income transfer programs designed to reduce poverty and improve the economic status of elderly persons. This gap highlights the importance of analyzing the income distribution of the elderly to determine the nature and extent of any inequalities that appear in it. Although government transfer programs have substantially enhanced the well-being of many of the elderly, numerous older persons continue to suffer low incomes.

Measures of income inequality provide insight into the relative economic positions of households, which are generally reported for the population as a whole. For example, the Bureau of the Census reports a decrease in U.S. household income inequality following World War II, from 1947 to 1968, followed by increased income inequality up to the mid-1990s.[1] This conclusion is reinforced by other studies of income inequality.[2] For the elderly in particular, the income distribution through the 1980s remained more unequal than that of the nonelderly.[3] Daniel B. Radner finds that income inequality declined for the elderly and rose for the nonelderly from 1967 to 1992. However, his findings are unclear, because "taking account of taxes and noncash income could, in actuality, affect the results of the comparisons made. Unfortunately, income data that cover taxes and noncash income do not exist for the full time period covered by this article."[4] The same argument applies to the analysis set forth herein.

Differential patterns of change in household money income distributions for different age groups during the 1990s require an expansion of previous analyses. A clue to changes in the distributions of income can be gleaned from a brief review of changes in median income by age group. While median income for the group aged 45 to 54 years increased 22 percent from 1967 to 1977, it rose only 7 percent during the next decade and actually declined 1 percent from 1987 to 1997.[5] For the group at preretirement age (55 to 64 years), median income increased 18 percent, 7 percent, and 6 percent during the same three decades. For elderly households (65 years and older), median income grew by almost a third (32 percent) from 1967 to 1977 and a further 27 percent from 1977 to 1987, but only 2 percent the following decade.[6] As will be shown later, these changes in median income correspond closely to shifts in the distribution of income. Notably, the trend of relatively higher increases in median income slows during the 1990s. Interestingly, for that decade only, growth in median income for households aged 55 to 64 years is greater than that for households aged 45 to 54 and that for households aged 65 and older.

The sections that follow present an analysis of the relative income distributions of elderly households over the three decades from 1967 to 1997,

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compared with income distributions of nonelderly households during the same three decades. Relative changes over time in the inequality of the distribution of income are determined and compared by age group. This information is critical to a consideration of the relative well-being of different age groups.

Economics and income inequality

The distribution of income and the extent of inequality are determined by several factors, including the functioning of the market system, a person's experiences in the labor market, government policies, household choices, and economic opportunities. While many of these factors are beyond the purview of the household, individual households make personal decisions that also determine the extent of inequality.

Economic theory seeks to explain how household decisionmaking influences inequality. Addressing life-stage decisionmaking and income and expenditure patterns, the traditional economic theory of households embodies the expectation that elderly households generally have lower incomes than nonelderly households. Consumer theory recognizes that income and, therefore, consumption and saving decisions vary over the life cycle. The classical theory of income that underlies consumption and saving behavior is grounded in two complementary economic theories: the "life cycle hypothesis"[7] and the "permanent-income hypothesis."[8] These theories are widely used to explain how changes in expected income over the lifetime of the household determine expenditure and saving patterns over time. Both approaches indicate that as households age, they are likely to experience declining income.

The life cycle hypothesis posits that consumers attempt to maintain a relatively stable consumption level through their lifetime by saving during their maximum earning years and dissaving during retirement, when income is reduced.[9] The related permanent-income hypothesis suggests that consumers adjust their spending levels to their perceived level of future income.[10] Thus, the underlying economic theory predicts that rational elderly consumers would tend to disregard reductions in current income in order to maintain previous living standards. Both of these theories predict that older households, expecting to receive relatively lower incomes, would tend to dissave by spending more than their current reduced incomes.

These two basic economic theories of income and consumption seek to describe household behavior in relation to a changing level of one's household income over the life cycle. But the theories do not predict either equality or inequality in the distribution of income for households of various types, nor do they predict the *effects* of inequality on households.

More recent theories of household economic behavior[11] indicate the role and consequences of household decisionmaking that affects both the income distribution and the degree of income inequality. Gary Becker, for example, develops a theory of family behavior that is intended to shed light on equality and the economic rise and fall of families. He posits that adult human capital, a major determinant of income, is in turn determined by endowments inherited from parents and by parental and public expenditures on children's development. Further, parents who are relatively richer are able to have both higher consumption and greater investments in their children, with less dependence on borrowing to finance the children's education and with less concern that the children's inheritances might be reduced. Therefore, Becker concludes, "The direct relation between the incomes of parents and children is likely to be concave rather than linear."[12]

Susan E. Mayer terms Becker's theory of family behavior the "investment theory" of the way parents' income affects children's life chances. She emphasizes the relationship between the economic achievements of parents and children, which results from both inherited endowments and parental investment in their children. She further suggests that these relationships engender higher rates of success for children raised in affluent families. Mayer also articulates a "role-model theory" that seeks to explain intergenerational trends in inequality. The theory emphasizes that both the family's income level and its relative position in the income distribution influence children's later positions in the income distribution.[13] This notion suggests that disadvantaged children are less likely to move up in the income distribution.

In contrast to Becker's perspective and similar to Mayer's view, Robert Frank's "positional consumption theory" concludes that, in addition to the absolute level of income, the household's relative position in the distribution of income is a critical factor for decisionmaking. Frank posits that households at the lower end of the income distribution have greater difficulty achieving community consumption standards, which affects their quality of life.[14]

Other researchers—most notably, Radner, in his analyses for the Social Security Administration—emphasize the importance of the distribution of income and of inequality.[15] This research needs updating and further consideration in the context of the theories of family behavior, intergenerational investment and role modeling, and positional consumption. In particular, as the oldest baby boomers enter preretirement age groups,[16] it is important to compare their income distribution with that of the elderly.

One would expect that if elderly households are concentrated at lower income levels, with a more limited number at higher income levels, then their income distribution would be relatively less equal than that of all households or of nonelderly households, similar to previously documented trends. However, it is also expected that, during the 1990s, the evolv-

ing market system, changes in labor market experiences, recent government policies, and alterations of household structures will generate changes in the degree of income inequality among older persons and also between older and working-age persons. Accordingly, patterns seen today may not extend into the future, and Social Security and medicare, as well as other transfer programs, must ultimately reflect the new distributions.

Methods

Data. The database utilized in this article comprises published grouped data from the U.S. Bureau of the Census Current Population Survey (CPS) on money income of households in the United States. Following Radner, the article uses cash income before taxes[17] of household units, classified by the age of the householder.[18] Approximately 50,000 households are interviewed monthly in the CPS sample, but only the March interview includes supplementary questions about money income.[19]

The data presented are for the years 1967, 1977, 1987, and 1997 from the March supplement to the CPS and additional Census Bureau publications on income.[20] The 4 years selected for analysis represent comparable periods in terms of macroeconomic activity: each falls during an extended period of growth and prosperity and is at least several years past the previous recession. Thus, the years of data analyzed are not differentially affected by macroeconomic conditions. The data for the years 1977, 1987, and 1997 are now available online.[21]

The CPS income data are for money income from all sources and combine money earnings (wage and salary income) with income other than earnings (the sum of money income from all sources except wages and salaries). The official Census Bureau definition of income is money income excluding capital gains before taxes.[22]

Several format changes were introduced into the CPS data over the three-decade period under consideration. The 1967 data were in a slightly different format from that for subsequent years, making it necessary to account for rounding error in that year's data. The CPS sample was redesigned several times to improve the quality and accuracy of the data and to reflect rising income levels in the Nation. The level of the lowest income group and the intervals between the groups increased over time. For example, the minimum income group, under $1,000 in 1967, was under $2,500 by 1987. The open-ended highest income group also increased over time, from $50,000 in 1967 to $100,000 in 1997. The number of income groups defined increased over time as well, from 18 in the 1967 data set, to 21 in 1977 and 1987, and 41 in the 1997 database. These changes were accounted for in compiling the income and household quintiles used in this article, so that the comparability of the Lorenz curves and Gini coefficients that were calculated remained unaffected.

For each of the 4 years examined, CPS-published grouped data, rather than microdata sets, were used. This choice was based on work by statisticians Mike Fuller and Ed Welniak, who concluded that analyses using grouped data sets closely approximate the results of analyses of microdata.[23] Because the CPS microdatabases are extremely large, it is often more efficient for researchers to employ grouped data, from which research results of comparable reliability are obtainable.[24]

Methodology. The distribution of income describes the relative shares of total income received by different population groups. The income distribution and the extent of inequality in it can be determined with the use of two standard economic measures: Lorenz curves and Gini coefficients.

A Lorenz curve is a geometric representation of the income distribution—a plot of the share of total money income received by the defined population category against shares of households in that category. Usually, the shares represented are quintiles (20-percent groupings) of income on the vertical axis and quintiles of households on the horizontal axis. The Lorenz curve depicts the cumulative percentage of income received against the cumulative percentage of households receiving it. Thus, a (straight-line) 45-degree Lorenz curve would represent an equal distribution of income, with 20 percent of households receiving 20 percent of income, 40 percent of households receiving 40 percent of income, and so forth. This line of equal income distribution is used as a standard against which the Lorenz curve of the actual distribution of income is compared to analyze the degree of inequality of income distribution.

An income distribution for one population group is found to be more equal than that for another if the Lorenz curve for the first population lies above the Lorenz curve for the second without intersecting it anywhere. Similarly, the income distribution for one population group is found to be less equal than that for another if the Lorenz curve for the first population lies below the Lorenz curve for the second without intersecting it anywhere. But if two Lorenz curves intersect, then the comparison is deemed ambiguous.[25]

The extent of inequality of an actual income distribution can be measured by a Gini index or coefficient (designated G, where $0 \leq G \leq 1$). The Gini coefficient compares the area between the 45-degree line of perfectly equal income distribution and the Lorenz curve of the actual income distribution in question. A Gini ratio with a value of zero indicates perfect equality of income distribution, with the actual curve coinciding with the 45-degree line. In contrast, a Gini ratio with a value of unity indicates perfect inequality. Thus, the larger the Gini coefficient (or the closer it is to its maximum value of unity), the greater is the degree of inequality in the actual distribution of income. Put another way, the more bowed out a Lorenz curve

is from the line of income equality, the less equal is the distribution of income it represents; and the closer the Lorenz curve is to the 45-degree line, the more equal is the income distribution represented.[26]

Because of the choice of data set used, some further refinements were required. To calculate the Gini coefficient using grouped CPS data, the mean income for each of the 40 $2,500-interval income levels was multiplied by the number of households in that group. However, this standard procedure requires that the upper limit of the open-ended $100,000-plus income group be determined. Accordingly, the open-ended highest income group for both elderly and nonelderly households for each of the 4 years of data studied was top coded. Thus, an upper boundary was defined for the top income group: twice the upper limit of the next-to-last income group.[27] This procedure has been demonstrated to closely approximate alternative approaches for grouped income data.[28]

Alternative approaches were tested and found wanting in that inconsistent effects would have biased the comparative findings for all years except 1997, which had a much larger number of income groups. The alternative approach of supplying an overall mean and letting the aggregate income of the open-ended category default to the remainder was used to determine the household and income quintiles for 1997.[29]

To calculate income and household groups by quintiles in order to develop the Lorenz curves, data were regrouped for each year. As noted earlier, the number of database income groups increased over the period of the study, from 18 in the 1967 CPS data to 21 in each of 1977 and 1987 and to 41 in 1997. For each of the 4 years examined, the cumulative share of the age group by income category was determined, and the data were regrouped into quintiles.

Table 1 presents the compiled regrouped CPS data in the form needed to develop comparative Lorenz curves and to calculate the associated Gini coefficients. The table shows the percentage share of money income for households, by income quintile, for elderly (aged 65 years and older) and nonelderly households for the 4 years examined. The table also shows the same data for middle-aged households (aged 55 to 64 years) and for further disaggregated elderly age groups (65 to 69 years, 70 to 74 years, and 75 years and older) for 1997, as well as the Gini coefficients for these age groups for each period.

Table 2 presents the Gini coefficients of the inequality of income distribution, by age group, for 1997. The 1997 values and standard errors are compiled and published in the CPS data, but those for the earlier years were not available. Hence, upper and lower limits were calculated in order to test the significant differences between Ginis for different age groups. These significant differences (at the 0.10 level) in the equality of income distribution between households are presented in the lower portion of the table.[30]

One caveat in the interpretation of findings from the data in table 2 is that comparisons of the effects of income and income inequality on household or individual well-being depend upon household size. Thus, analyses of well-being often utilize equivalence scales to adjust household or family income for differences in family size. Rubin and Nieswiadomy, for example, report that married-couple households require

Table 1. Percentage share of money income for households, by income quintile and age group, 1967, 1977, 1987, and 1997

Year	Age of householder	Income group					
		Lowest fifth	Second fifth	Third fifth	Fourth fifth	Highest fifth	Gini coefficient
1967	Under 65	5.4	12.0	17.0	23.0	42.5	0.366
	65 and older	3.8	7.5	12.0	21.2	55.8	.561
1977	Under 65	4.9	11.4	17.6	23.6	43.1	.358
	65 and older	5.4	8.7	13.6	21.4	51.0	.438
1987	Under 65	4.1	10.5	16.7	21.8	47.0	.395
	65 and older	4.7	7.2	14.1	22.0	52.0	.448
1997	Under 65	3.9	10.1	16.2	24.0	45.9	.426
	45–54	4.0	10.1	16.0	23.3	46.6	.409
	55–64	3.2	8.5	14.5	22.4	51.5	.464
	65 and older	4.5	8.6	13.5	21.4	52.0	.478
	65–69	3.8	8.3	13.7	21.4	52.8	.478
	70–74	4.7	9.1	14.0	21.2	51.1	.455
	75 and older	5.1	8.1	13.1	20.3	52.6	.466

SOURCE: Compiled from the following U.S. Bureau of the Census publications: *Consumer Income*, publication no. P60-57, 1968, tables 1, 2; *Money Income in 1977 of Households in the United States*, Current Population Reports, publication no. P60-117, 1978, tables 13, 35; *Money Income of Households, Families, and Persons in the United States*, Current Population Reports, publication no. P60-162, 1989, tables 8, 29; and Current Population Reports, March Supplement, 1998, table 15.

Table 2. Gini coefficients of the inequality of income distribution, by age group, 1997

Measure	Age group						
	Under 65	65 and older	45–54	55–64	65–69	70–74	75 and older
Gini coefficient	0.426	0.478	0.409	0.464	0.478	0.455	0.466
Standard error	.004	.010	.008	.011	.017	.019	.014
Upper limit	.433	.494	.423	.482	.506	.486	.490
Lower limit	.419	.462	.395	.446	.450	.424	.442

Age group	Under 65	45–54	55–64	65 and older	65–69	70–74	75 and older
Under 65	...	+	–	–	–	0	–
45-54	...	...	–	–	–	–	–
55-64	...	...	...	0	0	0	0
65 and older	...	...	...	...	0	0	0
65-69	...	...	...	...	...	0	0
70-74	...	...	...	...	...	...	0
75 and older	...	...	...	...	...	...	...

NOTE: All tests carried out at 0.10 significance level. Plus sign indicates row age group has larger Gini value. Minus sign indicates column age group has larger Gini value. Zero indicates no significant difference in Gini values.

SOURCE: U.S. Bureau of the Census, Current Population Reports, March Supplement, 1998, table 15.

income that is 37 percent higher than single-person households to achieve the same level of well-being.[31]

In comparing income inequality between elderly and nonelderly households, consideration may be given to the fact that many elderly households are single-person or married-couple households and nonelderly households tend to have a larger average size. Similarly, family size among the elderly has declined during the last 40 years, resulting in increasing numbers of single elderly, most of whom are women. If this decrease in average elderly household size is ignored, care must be taken not to assume that a change in inequality equates to a change in well-being.

The analysis presented in this article does not use equivalence scales to adjust for differences in household size because, as noted earlier, the data that are utilized are published grouped CPS data. Absent the use of microdata, it is not possible to use equivalence scales to adjust for household size.

Research questions

The study presented addresses the broad question, "What changes have occurred over time in the comparative income distributions and in the inequality of income distributions of elderly and nonelderly households?" To answer this question, it is necessary to ask and answer four other questions: (1) What is the 1997 income distribution of elderly households? (2) How has the income distribution of elderly households changed over the three decades from 1967 to 1997? (3) How has the degree of inequality of income distribution of elderly households changed over the same three decades? and (4) How does the income distribution of elderly households compare with that of nonelderly households?

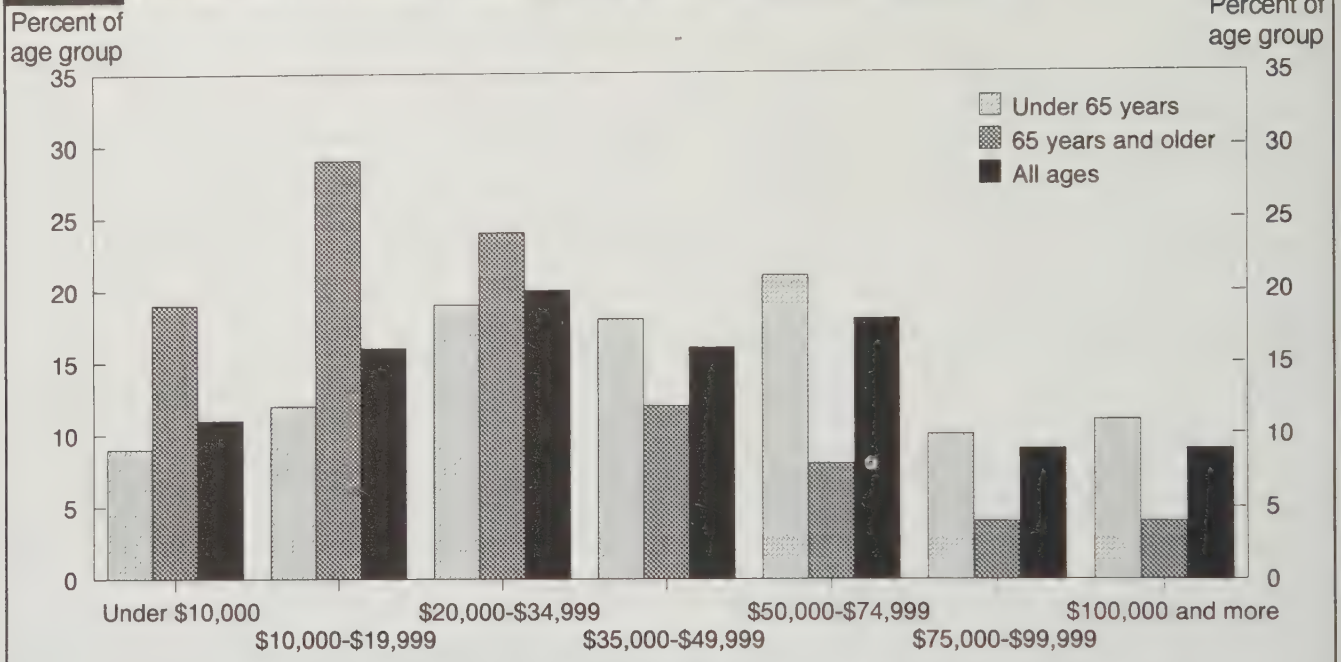
Results

1997 income distribution of elderly households. Chart 1 presents the 1997 money income distribution of U.S. households, by age group, comparing all households with those under age 65 and those aged 65 and older. As the life cycle hypothesis suggests, the data reveal the concentration of elderly households in lower income groups relative to households in their preretirement, prime earning years and to the total population. Approximately three-fourths of older households have annual incomes below $35,000. Almost 30 percent of households aged 65 and older have incomes in the range from $10,000 to $20,000, whereas only 12 percent of households under age 65 and 15 percent of all households are in this poverty or near-poverty range. In contrast, about 60 percent (the middle three quintiles) of nonelderly households have incomes between $20,000 and $75,000, with the largest concentration of nonelderly households (more than 20 percent) in the $50,000-to-$75,000 income group.[32]

Another way of viewing the differential income distribution of elderly and nonelderly households is to compare the share of households in each income quintile by age group, as seen in chart 2. In 1997, the percentage of elderly households in the lowest income quintile was twice as great as the percentage of nonelderly households in the same quintile, while fewer elderly households were in the two highest income quintiles than nonelderly households were in the highest quintile.

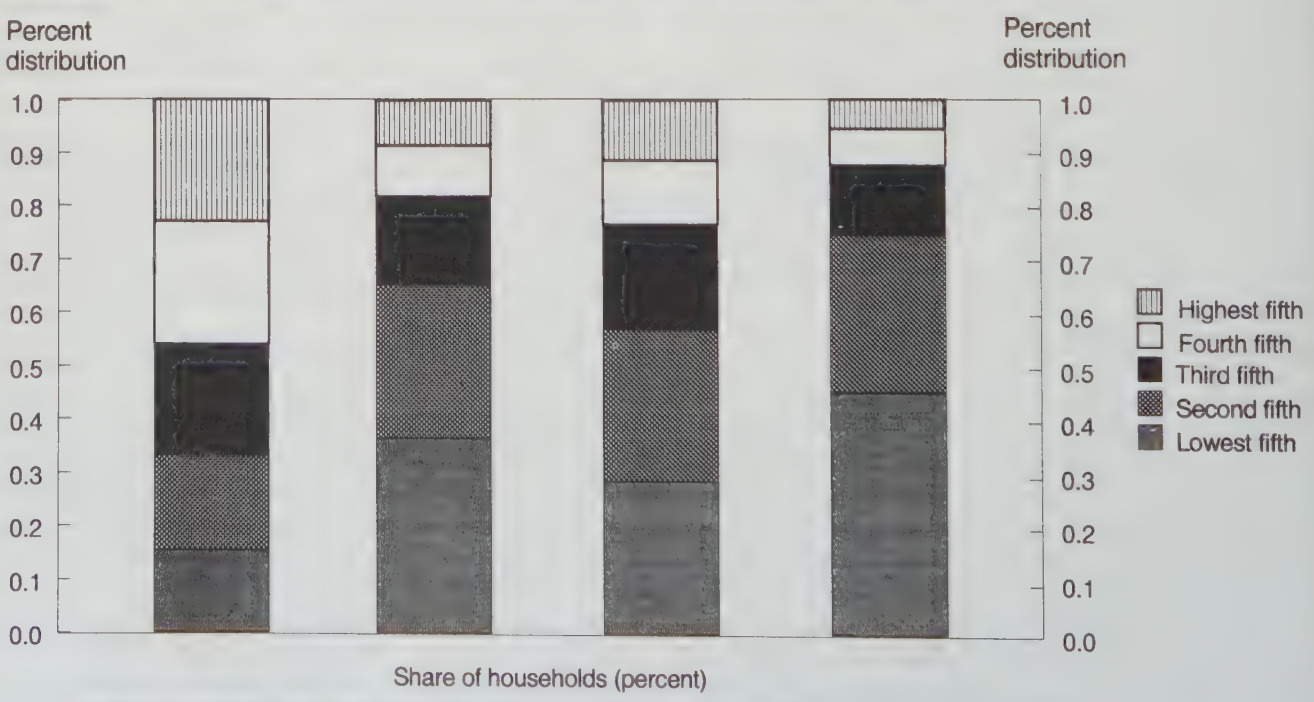
It is important to note that, because the data are not adjusted for family size, the findings reported in chart 2 may overestimate the extent of relative inequality between elderly and nonelderly. The chart indicates that the elderly are twice as likely as the nonelderly to be in the bottom quintile of the

Chart 1. Household income distribution, by age group and total population, 1997



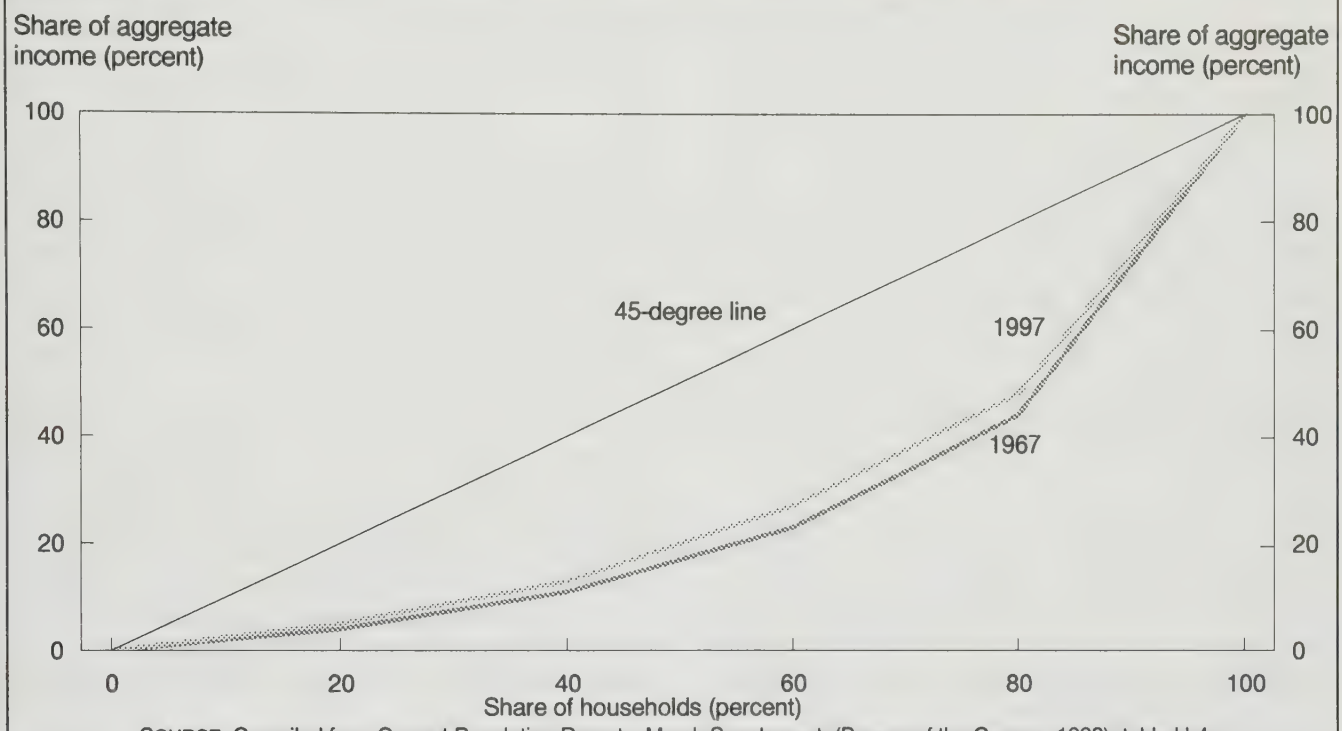
SOURCE: Compiled from Current Population Reports, March Supplement (Bureau of the Census, 1998), table H-4.

Chart 2. Percent distribution of households within income quintile, by age group, 1997



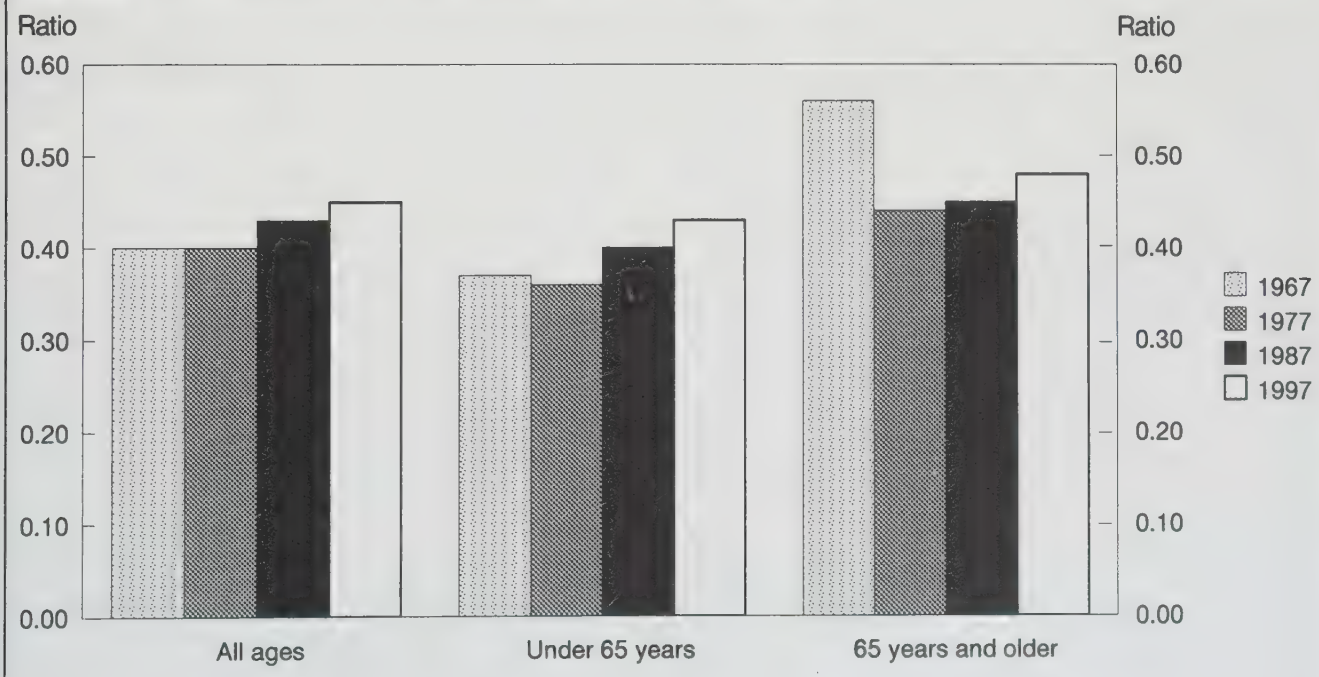
SOURCE: Compiled from Current Population Reports, March Supplement (Bureau of the Census, 1998), table 15.

Chart 3. Change in income distribution of elderly U.S. households aged 65 and older, 1997



SOURCE: Compiled from Current Population Reports, March Supplement (Bureau of the Census, 1998), table H-4.

Chart 4. Gini coefficient, by age groups, 1967, 1977, 1987, and 1997



SOURCE: Compiled from Current Population Reports, March Supplement (Bureau of the Census, 1998), table H-4.

income distribution. When researchers have used income adjusted by the poverty threshold to adjust for family size, the elderly are seen to be only 1.25 times more likely than the nonelderly to be in the bottom quintile of the income distribution.

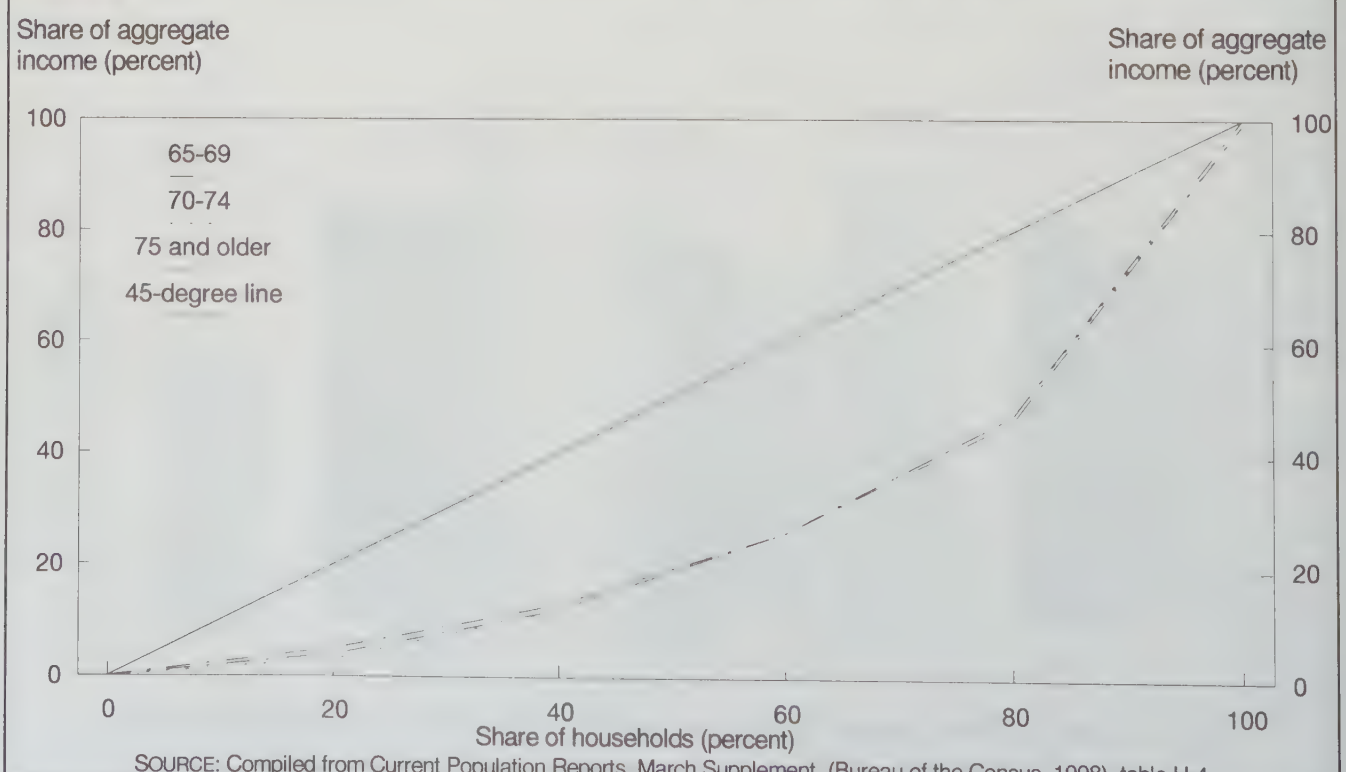
When the older population is further disaggregated, distinct income distribution differentials appear between those aged 65 to 74 and those aged 75 and older. Nearly half of all households in the latter category were in the lowest income quintile, compared with less than 30 percent of households aged 65 to 74. And more than twice as many households in the 65–74 age group were in the two highest income quintiles, compared with those aged 75 and older.[33] However, when the Gini coefficients for the 1997 income distribution are compared for the 65–69, 70–74, and 75-and-older age groups (see table 2), differences in the inequality of the income distributions of these groups turn out not to be significant.

Change in income distribution of elderly households over time. Chart 3 presents Lorenz curves comparing the income distributions of households with a householder aged 65 and older in 1967 and 1997. Over the three decades between those years, the Lorenz curve of the elderly household income distribution shifted inward, closer to the line of equal distribution of income. This shift clearly indicates that elderly households have achieved greater equality of income. However, the Lorenz curves for 1977, 1987, and 1997 are so close that it is impossible to distinguish them on one graph for comparison. The close comparability of elderly income distributions for these periods can be seen in the data presented in table 1.

Inequality of income distribution of elderly households. The degree of inequality of the income distribution of all elderly households changed significantly from 1967 to 1997. As shown by the Gini coefficients in table 1 and chart 4, in 1967–97, the largest change in the income distribution of older households occurred between 1967 and 1977. During that decade, the income distribution became significantly more equal for households aged 65 and older.

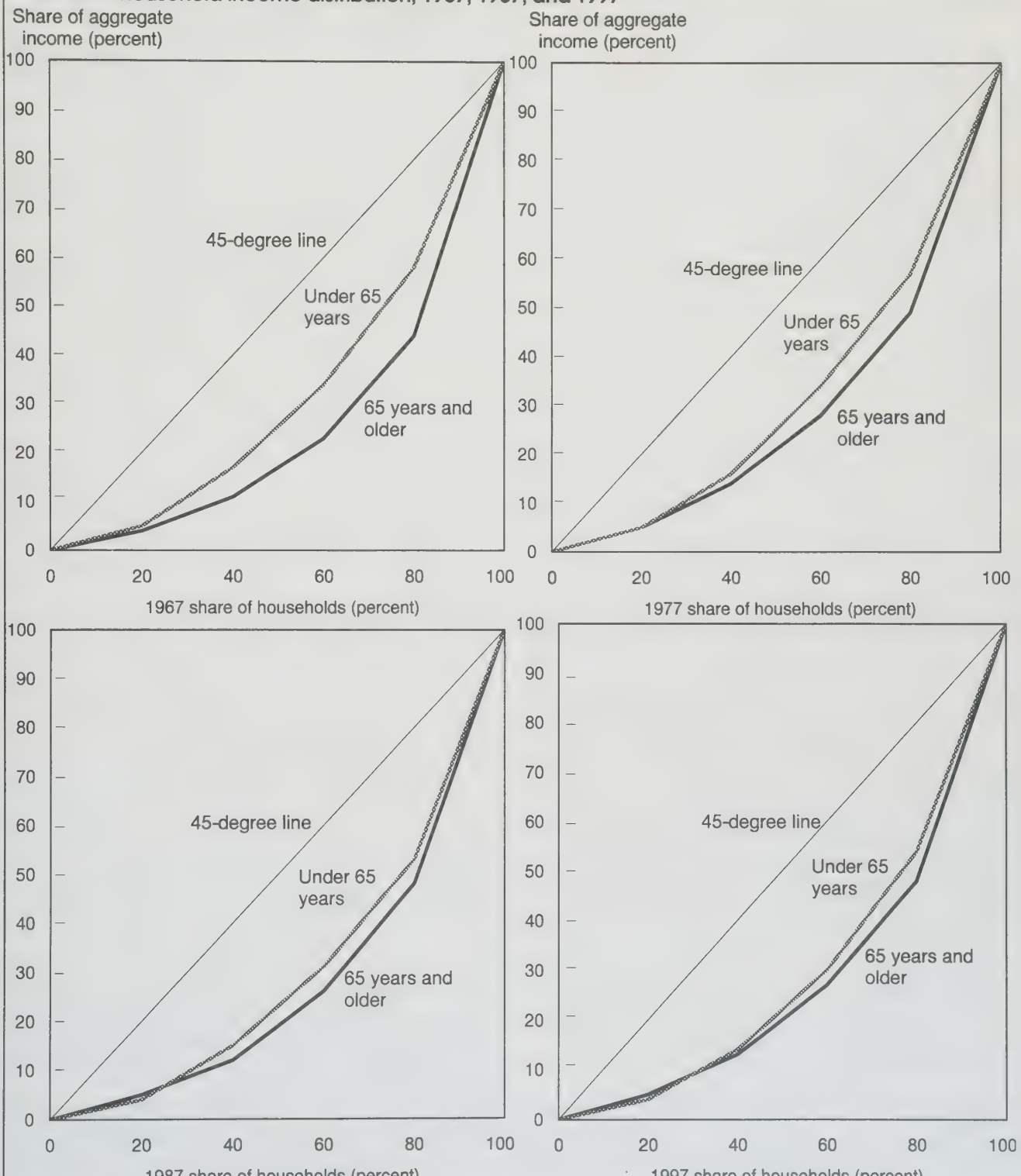
After 1977, the distribution of income for older households became slightly less equal in 1987 and again in 1997. This finding highlights the critical importance of the period analyzed. Looking at changes in equality of the income distribution only from 1977 to 1997 would present a much different picture than that found in this article. While the data from 1967 to 1997 reveal significant *decreases* in inequality, the data from 1977 to 1997 indicate slightly *increased* inequality. A similar pattern exists in households younger than 65. These findings

Chart 5. Comparison of U.S. elderly household income distributions, by age group, 1997



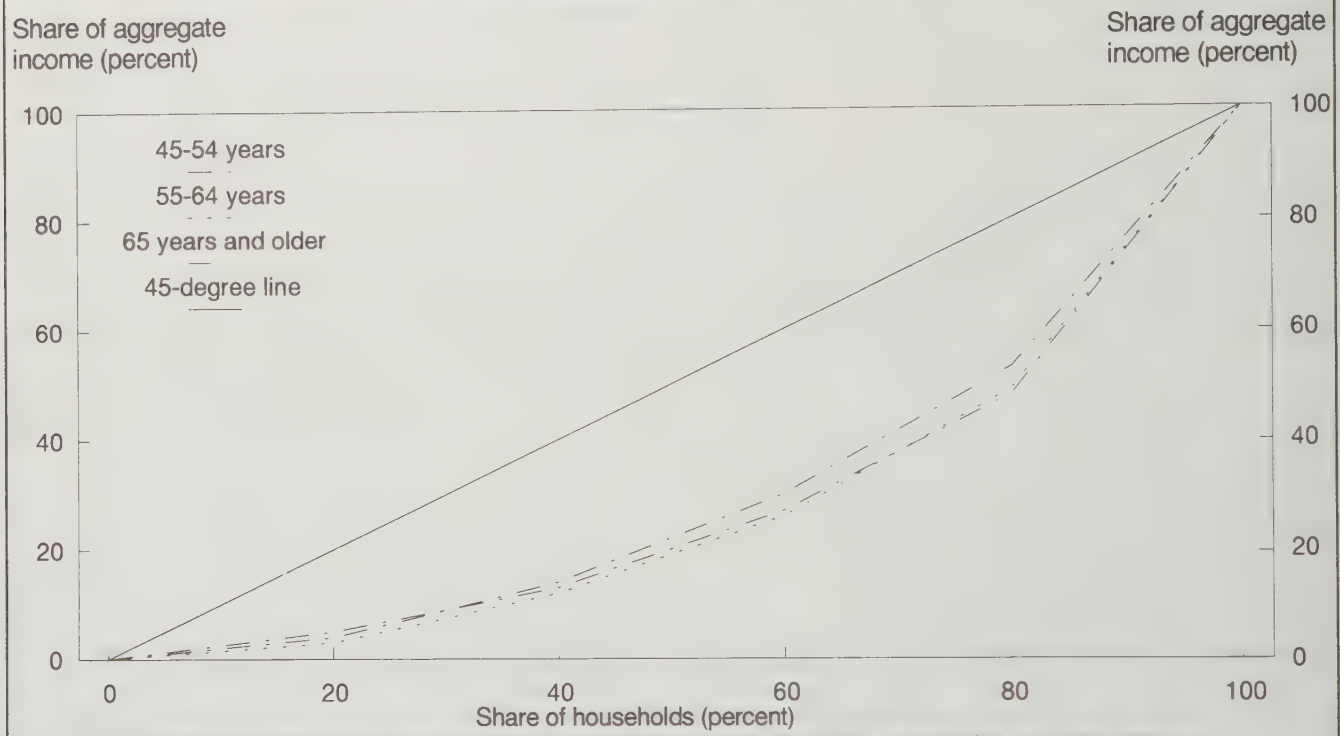
SOURCE: Compiled from Current Population Reports, March Supplement (Bureau of the Census, 1998), table H-4.

Chart 6. Comparison of U.S. elderly (aged 65 years and older) and nonelderly (under 65 years) household income distribution, 1967, 1987, and 1997



SOURCE: Compiled from the following U.S. Bureau of the Census publications: *Consumer Income*, publication no. P60-57, 1968, tables 1, 2; *Money Income in 1977 of Households in the United States*, Current Population Reports, publication no. P60-117, tables 13, 35; *Money Income of Households, Families, and Persons in the United States*, Current Population Reports, publication no. P60-162, 1989, tables 8, 29; and Current Population Reports, March Supplement, 1998, table 15.

Chart 7. Comparison of U.S. elderly (aged 65 years and older) and middle-aged (45–54 years and 55–64 years) household income distributions, 1997



SOURCE: Compiled from Current Population Reports, March Supplement (Bureau of the Census, 1998), table H-4.

show the importance of disaggregating the data by age group. When all age groups are aggregated, the data indicate increased inequality throughout the 1967–97 period; this is revealed *not* to be the case, however, when the age groups are disaggregated.

When older households are disaggregated by age group, the data indicate relatively small differences in the groups' income distributions. Chart 5 compares the 1997 income distributions of households aged 65 to 69 years, 70 to 74 years, and 75 years and older. The distributions are barely distinguishable, demonstrating the similarity of inequality of income distributions among these age groups. This finding is reinforced by the Gini coefficients listed in tables 1 and 2. In particular, table 2 shows no significant differences in the inequality of income distribution among elderly age groups, as measured by their Gini coefficients.

Comparison of income distribution of elderly and nonelderly households. In chart 6, the income distribution of elderly households is compared with that of nonelderly households, for each of the 4 years studied. The Lorenz curves reveal that the distribution of income of elderly households approached that of nonelderly households more closely in 1977 than in 1967, and the gap continued to narrow in each succeeding decade. These shifts can also be detected in the data in table 1, but the Lorenz curves present a visual image of the closing income distribution gap between the two groups. Over time, the decreasing gap corresponds with Gini coefficients that are converging.

Another perspective on the comparison of the income distributions of elderly with nonelderly households and with all U.S. households over time is seen in chart 4. Over the three decades since 1967, elderly households have larger Gini coefficients than nonelderly households, indicating a greater degree of inequality; however, the differences in the Ginis are quite small and are not significant. Since 1977, the Gini coefficients for all households, households under age 65, and those aged 65 and older have increased slightly and by about the same order of magnitude. This parallel movement reinforces the finding that both elderly and nonelderly households sustained slight declines in equality of their income distributions over the past two decades.

We can also compare the degree of inequality of income distributions by calculating ratios of Gini coefficients between nonelderly and elderly households. A value of 1.00 indicates the same degree of inequality of income distribution for the two groups, whereas a value less than unity indicates a greater degree of inequality for the elderly. The ratio was 0.762 in 1967, increased to 0.845 in 1977 and to 0.904 in 1987, and then de-

creased slightly to 0.883 in 1997. This movement provides further corroboration of the finding that the relative inequality of elderly and nonelderly income distributions declined between 1967 and 1987, but increased very slightly from 1987 to 1997.

It is particularly important to compare the income distribution of 65-and-older households with those of the preretirement (45 to 54 years) and middle-aged (55 to 64 years) groups, because such an analysis may shed light on expectations concerning the income distributions of future cohorts of older Americans. Chart 7 shows the 1997 Lorenz curves for the three groups. Households aged 45 to 54, the first wave of the baby-boom generation to reach middle age, have a more equal distribution of income than either of the two older groups. (See also table 2.) This preretirement group has the most equal distribution of income in 1997, compared with the distributions of the other age groups in the same year. In addition, the preretirement group's Gini index is significantly different from those of all older age groups. This finding may reflect the larger share of income generated from current earnings (wages and salaries) for the group than is generated for older households, which receive larger shares of income from wealth, assets, or pensions, all of which are highly unequally distributed. In addition, the finding may reflect differences in the demographic composition of the age groups, due to the shorter life expectancy of black males.

In contrast to the age 45–54 group, equality of the income distribution for the 55–64 group is not significantly different from that for older age groups. (See table 2.) Overall, the income distribution of the group aged 55 to 64 years is significantly more unequal (or less equal) than that of the group of 45- to 54-year-olds. But it is significantly more equal (or less unequal) than the income distribution of all other age groups, except the age 70–74 group, with which a comparison reveals no significant difference.

THE STUDY SET FORTH IN THIS ARTICLE used CPS data spanning three decades to analyze the income distributions of Americans in three age groups: 65 years and older, 55 to 64 years, and 45 to 54 years. Detailed knowledge of the income distribution and the extent of inequality in it contributes to our understanding of the economic well-being of groups within our society. Frank's positional income theory suggests that, as the distribution of income of the elderly became somewhat less equal since 1977, the lower income elderly faced a greater difficulty maintaining their standards of consumption and a high quality of life. Further, from 1987 to 1997, the degree of inequality increased over that from 1977 to 1987, possibly indicating a declining ability of lower income elderly persons to maintain their standard of living relative to the higher income elderly.

A particular problem for impoverished elderly households is their inability to change their low income status. The elderly are considerably less likely to move out of poverty than are nonelderly adults: the exit rates of the two groups were 14 percent and 25 percent, respectively.[33] This gap reflects the relative stability of elderly incomes during the past two decades. Thus, over a short period, the degree of inequality in the income distribution of the elderly is unlikely to shift substantially. However, over longer periods of decades, the differing economic statuses of the various groups, all becoming older and some proceeding into retirement, may alter the relative economic situation of the elderly.

The results of this study reveal that, over the past three decades, the Lorenz curve of elderly household income distribution has shifted inward, closer to the line of equal distribution of income. While this shift clearly indicates that elderly households have achieved greater equality of income distribution, close to three-quarters of elderly households have annual income levels below $35,000, and almost half of households aged 75 and older are in the lowest income quintile.

The concentration of older households in lower income groups relative to households in their preretirement, prime earning years and relative to the total population is clear. Households aged 45 to 54 have the most equal distribution of 1997 income, and their Gini index is significantly different from those for all older age groups. This state of affairs may presage shifts in the distribution of income and degree of inequality for future cohorts of elderly or retirees. □

Notes

[1] Daniel H. Weinberg, *A Brief Look at Postwar U.S. Income Inequality*, Current Population Reports, Publication No. P60–191 (Bureau of the Census, June 1996).

[2] See Nan L. Maxwell, "Demographic and Economic Determinants of United States Income Inequality," *Social Science Quarterly*, summer 1989, pp. 245–63; and Teresa Amott, "Re-slicing the Pie: Government Policy and Income Inequality," *Dollars & Sense*, May 1989, pp. 10–11.

[3] See Michael D. Hurd, "Research on the Elderly: Economic Status, Retirement, and Consumption and Saving," *Journal of Economic Literature*, June 1990, pp. 565–637; and Stephen Crystal and Dennis Shea, "The Economic Well-Being of the Elderly," *Review of Income and Wealth*, September 1990, pp. 227–47.

[4] Daniel E. Radner, "Incomes of the Elderly and Nonelderly, 1967–1992," *Social Security Bulletin*, winter 1995, pp. 82–97.

[5] All median-income figures used in this article are in constant 1998 dollars.

[6] *Historical Income Tables*, table H–15, "Age of Householder—Households by Median and Mean Income: 1967 to 1998," on the Internet at the Census Bureau home page, **http://www.census.gov/hhes/income/histinc/h10.htm**.

[7] Albert Ando and Franco Modigliani, "The Life Cycle Hypothesis of Saving: Aggregate Implication and Tests," *American Economic Re-*

view, March 1963, pp. 55–84.

[8] Milton Friedman, *A Theory of Consumption Function* (Princeton, NJ, Princeton University Press, 1957).

[9] See Ando and Modigliani, "Life Cycle Hypothesis of Saving."

[10] See Friedman, *Theory of Consumption Function.*

[11] See Gary Becker, *A Treatise on the Family* (Cambridge, MA, Harvard University Press, 1991); Robert Frank, *Microeconomics and Behavior* (New York, McGraw-Hill, 1997); and Susan E. Mayer, "Trends in the Economic Well-being and Life Chances of America's Children," Chapter 4 in Greg J. Duncan and Jeanne Brooks-Gunn (eds.), *Consequences of Growing Up Poor* (New York, Russell Sage Foundation, 1997).

[12] See Becker, *Treatise on the Family*, p. 251.

[13] See Mayer, *Economic Well-being and Life Chances.*

[14] See Frank, *Microeconomics and Behavior.*

[15] See Daniel B. Radner, "Money Incomes of Aged and Nonaged Family Units, 1967–1984," *Social Security Bulletin*, August 1987, pp. 9–28; "Changes in the Incomes of Age Groups, 1984–1989," *Social Security Bulletin*, December 1991, pp. 2–18; "An Assessment of the Economic Status of the Aged," *Studies in Income Distribution*, Publication No. 13–11776(16) (Social Security Administration, May 1993); and *Incomes of the Elderly and Nonelderly.*

[16] Daniel B. Radner, "The Retirement Prospects for the Baby Boom Generation," *Social Security Bulletin*, January 1998, pp. 3–19.

[17] See Radner, "Economic Status of the Aged"; and *Incomes of the Elderly and Nonelderly.*

[18] Since 1979, the term *householder* has been used in lieu of *head of household.* The householder is defined as the individual responding to the survey, who can be either spouse in a married-couple household. Therefore, classifying the household as elderly depends on the age of whichever spouse is the respondent.

[19] *Money Income in the United States: 1997*, Current Population Reports, publication no. P60–200 (Bureau of the Census, 1998).

[20] *Consumer Income*, publication no. P60–57 (Bureau of the Census, 1968), tables 1, 2; *Money Income in 1977 of Households in the United States*, Current Population Reports, publication no. P60–117 (Bureau of the Census, 1978), tables 13, 35; *Money Income of Households, Families, and Persons in the United States*, Current Population Reports, publication no. P60–162 (Bureau of the Census, 1989), tables 8, 29; *Consumer Income*, Current Population Reports, publication no. P60–57 (Bureau of the Census, 1998), table 1, p. 2; *Measuring 50 Years of Economic Change Using the March Current Population Survey*, Current Population Reports, publication no. P60–203 (Bureau of the Census, 1998), appendix, table C–19, pp. 35–41.

[21] See *Selected Characteristics by Quintile: March 1997*, Current Population Survey, Annual Demographic Survey, March Supplement (Bureau of the Census, 1997), table 3, on the Internet at **http://ferret.bls.census.gov/macro/031997/quint/3_000.htm**; Current Population Reports, March Supplement, table H–4 (Bureau of the Census, 1998), on the Internet at **http://ferret.bls.census.gov/macro/031998/hhinc/4_001.htm**; and Current Population Reports, March Supplement, table 15 (Bureau of the Census, 1998), on the Internet at **http://ferret.bls.census.gov/macro/031998/quint/15_000.htm**.

[22] See *Money Income in the United States: 1997*. In the current article, the Lorenz curve distributions of income include only cash income (money income and cash assistance) and do not encompass the value of in-kind subsidies, such as food stamps, subsidized housing, medicare, and medicaid. Future research could extend the results obtained herein by comparing the distributions of cash income and total cash plus in-kind income. If the total value of all subsidies (cash plus in-kind) were included in the analysis of income distribution, then inequality of the distribution of income would be reduced for all groups, but particularly for older Americans, who benefit from medicare and other subsidies. Therefore, caution must be exercised in attempting to extend the aforesaid conclusions on income distribution and the inequality of income distribution to a consideration of relative standards of living.

[23] See Mike Fuller, "The Estimation of Gini Coefficients from Grouped Data, Upper and Lower Bounds," *Economics Letters*, vol. 3, no. 2, 1979, pp. 187–92; and Ed Welniak, *Calculating Indexes of Income Concentration (GINI's) from Grouped Data: An Empirical Study* (Bureau of the Census, memo, June 10, 1998).

[24] Welniak, *Calculating Indexes of Income Concentration.*

[25] Radner, *Money Incomes of Aged and Nonaged.*

[26] See John A. Bishop, Subhabrata Chakraborti, and Paul D. Thistle, "Relative Deprivation and Economic Welfare: A Statistical Investigation with Gini-Based Welfare Indices, *Scandinavian Journal of Economics*, vol. 93, no. 3, 1991, pp. 421–37; B. Milanovic, "A Simple Way to Calculate the Gini Coefficient, and Some Implications," *Economics Letters*, vol. 56, no. 1, 1997, pp. 45–49.

[27] See J. J. Thompson, *The Journalist and the Gini Coefficient: A Statistical Approach to Covering Income Inequality*, master's thesis, School of Journalism and Mass Communications, University of North Carolina, 1995; J. J. Thompson, "A Tool for Measuring Income Inequality," *Nieman Reports*, spring 1997, pp. 42–44, on the Internet at **http://web3.searchbank.com/infotrac/session/708/269/367525w7/18!xrn**; and Welniak.

[28] Welniak, *Calculating Indexes of Income Concentration.*

[29] Welniak, *Calculating Indexes of Income Concentration.*

[30] See Bishop, Chakraborti, and Thistle, "Relative Deprivation and Economic Welfare."

[31] Rose M. Rubin and Michael L. Nieswiadomy, *Expenditures of Older Americans* (Westport, CT, Praeger Publishers, 1997), p. 60.

[32] Current Population Reports, March supplement, 1998, table H–4.

[33] Current Population Reports, March Supplement, 1998, table 15.

[34] Rubin and Nieswiadomy, *Expenditures of Older Americans*, p. 77.

Alternative CPI aggregations: two approaches

Plutocratic and democratic approaches for constructing an aggregate price index each incorporate different normative assumptions about the well-being of U.S. households; neither is favored by economic theory

Mary Kokoski

The theory of the cost-of-living index, which underlies the Consumer Price Index (CPI), is formulated within the context of the preferences and welfare of the individual. To construct an aggregate price index for a population requires that some method of aggregation be used to "average" the effects of price changes on all households in the population. It is intended that this aggregate index represent the "average" or "representative" household.

In most cases (including the CPI), the aggregation method used corresponds to a plutocratic index.[1] Other types of aggregation, such as the democratic index,[2] are also possible, and, in terms of economic theory, equally valid. However, as this article explains in a later section, the plutocratic approach is much more practicable, and it may provide a different measure of price change than the democratic index.

This article provides an empirical analysis of the differences between the plutocratic and democratic price indices, using data from the Consumer Expenditure Survey and the CPI for the 1987–97 period. The analysis constructs household-specific price indices from the Consumer Expenditure Interview sample, using the U.S. national average CPI series for all these households at the most detailed level of commodity disaggregation possible. Because the U.S. economy experienced low inflation during the 1987–97 period, this analysis also includes some hypothetical scenarios of price change. While it is impossible to predict what prices will do in future markets, these scenarios provide some information on the sensitivity of the differences between the plutocratic and democratic indices.

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Theory

The theory of the cost-of-living index, which underlies the consumer price index concept, is based on the observed preferences and implied welfare of a single individual, or a single household, if that household is assumed to behave as a cohesive decisionmaking unit. In practice, however, it is not possible for a government to produce a separate price index for each household in its population. Instead, statistical agencies construct an average, or representative index to measure the effects of price changes on the average or representative, household.

The CPI is the aggregate, representative measure of price change as experienced by households. It is based largely on the Laspeyres index formula and statistical samples of household expenditures, prices, and urban consumers in Metropolitan Statistical Areas.[3] For the CPI, the Consumer Expenditure Survey (CEX) collects information on a representative sample of U.S. urban households to determine their expenditure patterns. In addition, information on prices is collected from a sample of outlets and products based on their likelihood of being patronized and purchased, respectively. The overall CPI is then constructed by taking a weighted average of household information, and the result is a pluto-

cratic Laspeyres price index.

To illustrate this formally, one would first define the Laspeyres price index for each individual household, h, as:

$$(1) \qquad L_h = \sum_n S_n^h P_n,$$

where L_h is the index value for household h, S_n^h is the share of household h's total expenditures devolted to good n, and P_n is the market price for good n. It is assumed that all households face the same market price for goods and services. An aggregate Laspeyres index for a population is therefore, a weighted average of the price index values for all households in the population. If there are H households in the population, the aggregate index would look like:

$$(2) \quad L_H = \sum_{h=1}^{H} w_h \sum_n S_n^h P_n,$$

where w_h represents the weight given to the individual index for household h in computing the average.

The choice of the weighting scheme used to derive the aggregate price index is not prescribed specifically by economic theory. It depends upon the assumptions adopted about the social wefare function for the society whose index it represents.[4] If we decide to accord equal weight to each household in its representation in the aggregate index, then $w_h = 1/H$ for all households h and the aggregate price index follows the democratic formula. If we decide to weight each household in accordance to its total household expenditure, then the weights are determined by:

$$(3) \qquad w_h = E_h \Big/ \sum_h E_h,$$

where E_h is the total expenditure of household h. The plutocratic formula is formed by using this weighting scheme (3) with equation (2).

For the plutocratic formula, expenditure shares for each good, by all households, are treated as if they were those of one aggregate "super-household."[5] This is favorable because the index can be constructed from information just on the prices and mean expenditure shares of all households. In contrast, to produce a democratic index, one must first construct the price indices for each individual household, then average them to produce an aggregate index. This is far less practicable.

In the democratic index, the expenditure pattern of each household counts in equal measure in determining the population index; in essence, it is a case of "one household-one vote." In the plutocratic case, the contribution of each household's expenditure pattern is positively related to the total expenditure of that household, relative to other households—in essence, "one dollar, one vote." If all households, regardless of how much they spend in total, have the same expenditure pattern, then both formulas would give the same index number as a result. Also, if all prices change by the same amount, the two index formulas will give the same result (a trivial case). However, if expenditure patterns differ across households, then there is no reason to expect the democratic and plutocratic indices to provide the same numbers. Most importantly, if the expenditure patterns of households differ systematically according to how much they spend in total, then the differences between the democratic and plutocratic formulas is of more than academic interest.

It is reasonable to assume that household expenditure is strongly related to household income, at least relative to other households. More affluent households are likely to spend more in any given period than poorer households. Such relatively more well-to-do households are also more likely to spend a higher proportion of their total expenditure on different goods and services than are less affluent households, specifically on those goods that are not income-elastic or classified as "necessities" (for example entertainment and travel). In this situation, the democratic index may be more representative of the inflation experience of the less rich households, while the plutocratic index may be more representative of richer households.

Empirical experience

To assess the importance of the choice of a plutocratic, versus a democratic approach for the CPI, we start with a historical empirical analysis. We use the same data as those for the CPI, specifically, the Consumer Expenditure Survey (CEX), to provide the household expenditure weights and CPI item price indices for the price changes in goods and services. The CEX sample comprises the 1982 and 1984 households in the Interview survey. Households participating in the Interview survey provide information on their expenditures on various goods and services in four separate quarterly interviews. The Diary survey complements the Interview by collecting expenditure information on more detailed categories of goods and services, those which are purchased frequently, such as food. This survey comprises a different sample of households than the Interview participants, and it is administered in two weekly

Table 1. Price indices by major expenditure category, 1987–97

[1987=100]

Year	Food	Housing	Fuel/ utilities	House-furnishings	Apparel	Trans-portation	Medical	Entertain-ment	Other[1]
1988	104.1	103.8	101.4	102.2	104.3	103.1	106.5	104.3	106.6
1989	110.0	107.7	104.7	103.8	107.2	108.3	114.8	109.7	114.9
1990	116.4	112.5	108.3	105.8	112.2	114.3	125.1	114.9	123.7
1991	120.5	117.0	111.9	108.3	116.4	117.5	136.1	120.0	133.5
1992	122.2	120.4	114.4	110.2	119.3	120.0	146.1	123.4	142.7
1993	124.8	123.6	117.8	111.4	120.9	123.7	154.8	126.5	150.1
1994	127.7	126.8	119.2	113.0	120.6	127.4	162.9	130.2	154.5
1995	131.2	130.0	120.1	114.8	119.4	132.0	169.5	132.7	161.0
1996	135.4	133.8	123.8	116.4	119.1	135.7	175.4	136.8	167.6
1997	138.9	137.3	127.0	117.1	120.2	136.9	180.3	139.9	174.9

[1] Other includes personal care, education expenses, tobacco products, and legal and funeral expenses.

installments. For the CPI, information from the Diary survey is statistically raked into the expenditure share information from the Interview survey to calculate the expenditure weights. For example, while the Interview survey provides the expenditure share for all food at home, the Diary survey allows this share to be further disaggregated into the various categories of food items. While this works well for the CPI, a plutocratic method, the construction of an alternative, democratic index requires constructing household-level price indices and thus limits the analysis to the Interview sample and that level of detail.

In this empirical analysis, the total number of households is 18,984, and the study period encompasses 1987–97. By choosing 1987 as the reference period, we are able to observe that a few more detailed expenditure categories could be included that did not have separate item price indices in 1984. Beyond 1997, some item category definitions changed, which would have limited the level of detail as well. The total number of expenditure categories is 146. Unfortunately, there are no data available to determine whether there are differences in the prices paid for any goods and services across households. It is assumed that the same U.S. national urban average CPI prices apply to all the households in the sample.

While the household indices were constructed from 146 expenditure categories, it is difficult to get a sense of price change patterns from such a detailed list of item price indices. Thus, to provide a setting for the analysis, table 1 presents an overview of the price changes for the 1987–97 period (1987=100) by general expenditure category. As this table shows, the relative prices for fuels and utilities and house-furnishings increased most slowly, while those of medical care and other goods and services increased most rapidly. Overall, however, inflation rates were lower during the 1987–97 period than in other periods such as the 1970s and early 1980s.

Household-specific price indices were constructed for each household in the 1982 and 1984 CEX sample. These indices were then aggregated by both the plutocratic method and the democratic method (from the formulae in the previous section). The resulting aggregate index values for 1987–97 are presented in table 2, along with the percentage difference between the plutocratic index value and its corresponding democratic index counterpart.

Generally, it appears that there is very little difference between the two types of indices over the 1987–97 study period, with the democratic index usually slightly higher in value. The largest differences are about 1 index point, and occur from 1990 through 1992. The inflation rates for most commodities appear to be somewhat higher during this 3-year period, compared with other rates within the study period. Although in one year, 1995, that the plutocratic index value appears to exceed its democratic counterpart, there is no overall trend or divergence between the two index series. It is difficult to draw quantitative conclusions from the index values because the statistical significance of these results is not known. Qualitative conclusions, however, can be made.

The practical implications of using the plutocratic versus

Table 2. Plutocratic and democratic index values, (whole sample), 1987–97

[1987 = 100]

Year	Democratic	Plutocratic	Percentage difference
1988	103.76	103.84	–0.077
1989	108.38	108.90	–.480
1990	113.71	114.93	–1.073
1991	117.95	119.14	–1.009
1992	121.27	122.22	–.783
1993	124.95	125.57	–.496
1994	128.30	128.59	–.226
1995	132.05	132.03	.015
1996	135.61	135.92	–.229
1997	138.01	138.70	–.500

the democratic price index formula depend upon the extent of systematic differences in expenditure patterns across households and the patterns of price changes experienced by these households. Because the plutocratic index will likely be more representative of those households with higher total expenditures, it would be of interest to examine the differences between the plutocratic and democratic aggregations by population subgroups defined by different levels of total expenditure. Therefore, we divided the household sample into expenditure quintiles and constructed separate plutocratic and democratic indices by quintile. The lowest quintile (1) includes those households that are in the lowest 20 percent of the CEX sample, as ranked by total household expenditure. The highest quintile (5) is, therefore, the highest 20 percent of households in terms of expenditure. While each quintile includes the same number of households, the range and mean of total expenditures by quintile varies, as shown in the following tabulation:

Quintile	*Mean expenditure*	*Range of expenditure amounts*
1	$1,066.57	$6.00 – $1,737.13
2	2,389.00	1,737.14 – 3,069.69
3	3,863.32	3,069.80 – 4,730.88
4	5,933.02	4,730.99 – 7,522.17
5	13,195.87	7,522.20 – 89,561.12

This tabulation also shows the range of total expenditure values encompassed by each quintile varies from about $1,600 (quintile 1 through quintile 3) to a high of more than $80,000 in quintile 5. Doubtless there are a few "outlier" households in the highest quintile. However, because they are legitimate members of the sample and represent the very high-expenditure households in the population, they are not eliminated from this study.

The plutocratic and democratic index values by expenditure quintile are presented in table 3. The percentage difference between the plutocratic value and its democratic counterpart (based on the values in table 3) are provided in table 4. As for the sample taken as a whole, the differences between the plutocratic and democratic indices within each quintile are generally quite small. The largest differences appear in the first and fifth quintiles, which was expected in the latter case. In quintile 5, there are a very few households with very high expenditures, which therefore have a larger effect on the plutocratic index. In comparison, the democratic index within quintile 5 diminishes the disproportionate contribution that those households make to the index value. Still, while the democratic index for quintile 5 rises more quickly than its plutocratic counterpart, the differences are generally less than 1 index point. In other quintiles there is no consistent pattern; the plutocratic index value often exceeds the democratic index value. By comparing index values by index type across quintiles an interesting pattern emerges. For the plutocratic index, there is a general inverted U-shaped pattern, with higher index values in the middle three quintiles and lower values in quintile 1 and quintile 5. The cross-quintile pattern for the democratic index is different, with generally the lowest index values in the highest quintile, quintile 5. Again, the differences are quite small.

Past empirical studies have shown that differences in expenditure patterns based on household demographic attributes are generally not statistically significant and separate indices for different demographic groups do not necessarily better represent subgroups within larger groups.[6] For most *a priori* definitions of demographic groups, there is generally more variation across households within each group than there is across groups. Again, one should not draw quantitative conclusions from these results because the statistical significance of any differences observed in this analysis between quintile indices is unknown.

Empirical analysis relies upon observed information. In recent years (the study period), both overall inflation and variability of price changes relative to each other have been

Table 3. Index values by expenditure quintile, 1987–97

[1987 = 100]

Year	Quintile 1		Quintile 2		Quintile 3		Quintile 4		Quintile 5	
	Plutocratic	Democratic	Plutocratic	Democratic	Plutocratic	Democratic	Plutocratic	Democratic	Plutocratic	Democratic
1988	103.74	103.73	103.86	103.86	103.89	103.89	103.97	103.97	103.62	103.74
1989	109.32	109.35	109.19	109.19	108.99	109.00	108.90	108.90	107.74	108.04
1990	116.11	116.19	115.63	115.65	115.15	115.16	114.79	114.81	112.26	112.82
1991	120.06	120.09	119.90	119.91	119.51	119.52	119.14	119.17	116.41	117.02
1992	122.62	122.54	122.96	122.96	122.73	122.74	122.50	122.52	119.87	120.48
1993	125.28	125.12	126.08	126.06	126.05	126.05	126.08	126.09	123.89	124.52
1994	127.85	127.64	128.93	128.90	129.02	129.01	129.24	129.24	127.59	128.15
1995	130.84	130.60	132.14	132.11	132.37	132.36	132.87	132.85	131.68	132.27
1996	135.05	134.85	136.26	136.23	136.30	136.30	136.66	136.65	134.85	135.56
1997	138.09	137.82	139.36	139.34	139.31	139.31	139.47	139.47	136.72	137.58

Table 4. Percentage difference between plutocratic and democratic index, by year and quintile, 1987–97

Year	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
1987	0	0	0	0	0
1988	.00964	0	0	0	–0.116
1989	–.027	0	–.0092	0	–.033
1990	–.069	–.017	–.0087	–.017	–.499
1991	–.025	–.0083	–.0084	–.025	–.524
1992	.0652	0	–.0081	–.016	–.509
1993	.1277	.0159	0	–.0079	–.509
1994	.1643	.0233	.0075	0	–.439
1995	.1834	.0227	.0076	.0151	–.448
1996	.1481	.022	0	.0073	–.527
1997	.1955	.0144	0	0	–.629

smaller than those in other historical periods. Thus, price index values have exhibited very little change. If plutocratic and democratic indices do not differ much over the period of empirical observation, conclusions from an empirical analysis cannot be easily generalized and the sensitivity of the issue to more extreme experiences of price change has not been tested. In the context of the Laspeyres index, because of its fixed weight property, it is fairly straightforward to perform a simple sensitivity test of this issue. This is done by posing hypothetical scenarios of price change and assessing the resulting effects on the comparison of plutocratic and democratic index formulations.

Hypothetical scenarios

If the historical period of study does not provide much evidence of a difference between the plutocratic and democratic index alternatives, then what price change scenarios could be used to highlight this issue? Granted, it is impossible to predict what specific price regimes might occur in the future, or how consumer behavior might change and make the fixed-weight Laspeyres assumption untenable. It is also impractical to simulate large numbers of hypothetical price change scenarios and attempt to summarize them in a meaningful way. Nevertheless, it may be illuminating to simulate a few scenarios for price change, including a few extremes, and make a qualitative assessment of their effects.

Because the issue of plutocratic and democratic index differences is driven by differences in expenditure patterns among households, which are correlated with total expenditure (and, thus, likely income), we have framed this hypothetical analysis within this context. First, we pose several degrees of price change, from a decline of 10 percent to an increase of 500 percent. Using the observed relative prices for 1987 as the reference, we pose these hypothetical price change scenarios on the CEX sample in the previous analysis for two different groups of commodities and services, while all other prices are held the same (that is at the 1987 level).

Based on a survey of the empirical literature, and the observed expenditure shares by quintile in our CEX sample, we identify a set of commodities and services as "necessities" and "luxuries." Necessities are those goods and service categories that are expenditure (or income) inelastic. "Luxuries" are expenditure (and income) elastic goods. This is not a finely detailed, or by any means, a definitive categorization, but we have included the following items in the necessities group: food at home, shelter, fuels and utilities, motor fuel, vehicle maintenance and repair, tobacco products, and personal care. Among luxuries we include alcoholic beverages, food away from home, housefurnishings, and entertainment. These two groups are not mutually exhaustive because several categories of goods and services appeared to be ambiguous or their elasticities unknown, based on the existing literature. Any number of groupings of item categories is possible, even given this elasticity criterion; these groupings are intended to be illustrative.

While it may not be informative to provide the expenditure shares by 146 detailed categories, table 5 presents a summary for more aggregate categories by expenditure quintile. These shares generally corroborate the economic literature, with lower quintiles having higher shares of expenditures for food, housing, and fuels and utilities. Private transportation has a higher relative share for higher quintile groups because it includes not only motor fuels, and maintenance and repair, but also vehicle purchases themselves. Higher quintile groups also spend relatively more on entertainment and housefurnishings.

The index values for the hypothetical scenarios are presented in table 6 for the aggregate sample of households. The results in table 6 show the expected outcome that the democratic index will increase more rapidly than the plutocratic as the relative prices of necessities increase. It appears that the democratic index will exceed its plutocratic counterpart by 1 index point for every 10-percent change in prices for necessities. Thus, if those prices should rise by 100 percent, the democratic index will be 10 points higher, or 14 percent higher,

Table 5. Average expenditure shares, by expenditure quintile and commodity

Commodity	Quintile 1	Quintile 2	Quintile3	Quintile 4	Quintile 5
Food	0.302	0.294	0.271	0.268	0.241
Housing	.170	.185	.181	.157	.103
Fuels and utilities	.168	.170	.156	.156	.116
Furnishings	.033	.044	.049	.055	.073
Apparel	.057	.049	.053	.055	.069
Private transportation	.069	.105	.129	.150	.229
Medical care	.108	.072	.072	.071	.060
Entertainment	.025	.027	.031	.033	.050
Other[1]	.067	.055	.057	.055	.059

[1] Other includes personal care, education expenses, tobacco products, and legal and funeral expenses.

Table 6. Simulated price change scenarios for necessity and luxury items

Price change (in percent)	Necessities			Luxuries		
	Plutocratic	Democratic	Percent difference	Plutocratic	Democratic	Percent difference
0	100	100	0	100	100	0
–10	96.17	94.18	2.07	98.04	98.06	–.02
–5	97.58	97.09	.50	99.02	99.03	–.01
–1	99.51	99.42	.09	99.8	99.81	–.01
1	100.48	100.58	–.10	100.2	100.19	.01
5	102.42	102.91	–.48	100.98	100.97	.01
10	104.83	105.82	–.94	101.96	101.94	.02
15	107.25	108.73	–1.38	102.93	102.91	.02
20	109.67	111.64	–1.80	103.91	103.88	.03
50	124.17	129.11	–3.98	109.78	109.7	.07
100	148.34	158.21	–6.65	119.56	120.22	–.55
120	158.01	169.85	–7.49	123.47	123.27	.16
130	162.84	175.67	–7.88	125.42	125.21	.17
150	172.51	187.31	–8.58	129.38	129.09	.22
200	196.68	216.42	–10.04	139.11	138.78	.24
250	220.85	245.52	–11.17	148.89	148.48	.28
300	245.02	274.63	–12.08	158.67	158.18	.31
350	269.19	303.73	–12.83	168.44	167.87	.34
400	293.36	332.84	–13.46	178.22	177.57	.36
450	317.53	361.94	–13.99	188.00	187.26	.39
500	341.7	391.05	–14.44	197.78	196.96	.41

than the plutocratic index. The designated luxury goods group represents a smaller proportion of the average household's total expenditures than necessities, so the impact of radically changing its prices is much less. As expected, under these scenarios, the plutocratic index will rise more quickly than its democratic counterpart. The maximum difference, however, is less than 1 index point, or 0.4 percent, when luxury prices rise by the extreme of 500 percent.

To illustrate the index values for the hypothetical scenarios, we provide the values for the same scenarios by expenditure quintile for necessities and luxuries. Table 7 provides the corresponding differences between the plutocratic and democratic index values by expenditure quintile and price change scenario and table 8 provides the corresponding percentage differences.

In table 7 (top panel), the pattern of differences between index types across quintiles, is somewhat more interesting. In the lowest quintile, the plutocratic index exceeds the democratic, but by a very small amount. In the other quintiles, the democratic index exceeds the plutocratic index when prices for necessities rise, but again, the differences are very small. The largest divergence between index types is, as expected, within the highest quintile, quintile 5, but still, only 4 index points with a doubling of prices for necessities. In table 7 (lower panel), the pattern comparing index types across quintiles is the opposite of table 7 (top panel). The largest divergence is, again, in quintile 5, at about 1 index point for a doubling of prices for luxuries.

In some extreme cases, hypothetical scenarios give some indication of the maximum effects that price changes could impose on the comparison of plutocratic and democratic indices. However, it is the pattern of price changes, not the general level of inflation, which matters for this issue. In the empirical analysis (in the previous section), the democratic index exceeded the

plutocratic by about 0.6 points in 1997, when prices were less than 40 percent higher than the reference period. If the prices of only necessities were to increase by 50 percent, the simulated democratic index exceeds the simulated plutocratic index by 5 points. Because patterns of price change cannot be predicted, such analysis is an empirical matter.

Conclusions

This analysis examines the issue of the choice between the plutocratic ("one dollar-one vote") approach and the democratic ("one household-one vote") approach to constructing an aggregate price index for a society. Neither is favored by economic theory, but each incorporates different normative assumptions about the social welfare function. The extent to which the two types of index formulation will give different index values is an empirical issue; the divergence depends upon the systematic difference in household expenditure patterns, the patterns of price changes which occur, and the assumptions about household behavior which underlie the

Table 7. Simulated price changes for necessities and luxuries, by quintile

Price change (in percent)	Quintile 1		Quintile 2		Quintile 3		Quintile 4		Quintile 5	
	Plutocratic	Democratic	Plutocratic	Democratic	Plutocratic	Democratic	Plutocratic	Democratic	Plutocratic	Democratic
Necessities:										
0	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
–10	93.35	93.41	93.47	93.46	93.76	93.74	94.31	94.29	96.42	96.01
–5	96.68	96.70	96.73	96.73	96.88	96.87	97.16	97.14	98.21	98.00
–1	99.34	99.34	99.35	99.35	99.38	99.37	99.43	99.43	99.64	99.60
1	100.67	100.66	100.65	100.65	100.62	100.63	100.57	100.57	100.36	100.40
5	103.33	103.30	103.27	103.27	103.12	103.13	102.84	102.85	101.79	102.00
10	106.65	106.59	106.53	106.54	106.24	106.26	105.69	105.72	103.58	104.00
15	109.98	109.89	109.80	109.81	109.37	109.39	108.53	108.57	105.38	105.99
20	113.30	113.18	113.06	113.08	112.49	112.52	111.37	111.43	107.17	107.99
50	133.25	132.96	132.66	132.71	131.22	131.31	128.44	128.57	117.92	119.97
100	166.50	165.91	165.31	165.42	162.44	162.81	156.87	157.15	135.83	139.95
120	179.80	179.10	178.38	178.50	174.92	175.13	168.25	168.58	143.00	147.94
130	186.45	185.67	184.91	185.05	181.17	181.39	173.93	174.29	146.58	151.93
150	199.75	198.87	197.97	198.13	193.65	193.91	185.31	185.72	153.75	159.92
200	233.00	231.83	230.62	230.84	224.87	225.22	213.74	214.29	171.66	179.89
200	266.25	264.79	263.28	263.55	256.09	256.52	242.18	242.87	189.58	199.87
300	299.50	297.74	295.94	296.26	287.31	287.83	270.62	271.44	207.49	219.84
350	332.75	330.70	328.59	328.97	318.53	319.13	299.05	300.00	225.41	239.81
400	366.00	363.66	361.25	361.28	349.74	350.44	327.49	328.59	243.32	259.79
450	399.25	396.61	393.91	394.39	380.96	381.74	355.92	357.16	261.24	279.76
500	432.50	429.57	426.56	427.10	412.18	413.05	384.36	385.74	279.15	299.73
Luxuries:										
0	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
–10	98.23	98.17	98.23	98.23	98.06	98.07	97.85	97.86	98.08	97.98
–5	99.11	99.09	99.11	99.12	99.03	99.03	98.93	98.93	99.04	98.99
–1	99.82	99.82	99.82	99.82	99.81	99.81	99.79	99.79	99.81	99.80
1	100.18	100.18	100.18	100.18	100.19	100.19	100.22	100.21	100.19	100.20
5	100.89	100.92	100.89	100.88	100.97	100.97	101.08	101.07	100.96	101.01
10	101.77	101.83	101.77	101.76	101.94	101.93	102.15	102.14	101.92	102.02
15	102.66	102.75	102.66	102.65	102.91	102.90	103.22	103.21	102.88	103.03
20	103.55	103.66	103.55	103.54	103.89	103.87	104.30	104.28	103.84	104.04
50	108.87	109.16	108.87	108.84	109.71	109.67	110.75	110.70	109.60	110.11
100	117.74	118.31	117.73	117.68	119.43	119.34	121.49	121.41	119.20	120.22
120	121.29	121.97	121.28	121.22	123.31	123.21	125.79	125.69	123.04	124.27
130	123.07	123.80	123.05	122.99	125.25	125.14	127.94	127.83	124.96	126.29
150	126.61	127.46	126.59	126.53	129.14	129.01	132.24	132.11	128.80	130.33
200	135.49	136.62	135.46	135.37	138.85	138.67	142.98	142.81	138.40	140.45
250	144.36	145.77	144.32	144.21	148.56	148.34	153.73	153.52	148.00	150.56
300	153.23	154.93	153.19	153.05	158.28	158.01	164.47	164.22	157.60	160.67
350	162.10	164.08	162.05	161.89	167.99	167.68	175.22	174.92	167.20	170.78
400	170.97	173.24	170.92	170.73	177.70	177.35	185.96	185.62	176.80	180.89
450	179.84	182.39	179.78	179.58	187.42	187.02	196.71	196.33	186.40	191.00
500	188.71	191.55	188.65	188.42	197.13	196.69	207.45	207.03	196.00	201.11

Table 8. Percentage differences between plutocratic and democratic index for necessities and luxuries, by scenario and quintile

Price change (in percent)	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
Necessities:					
0	0	0	0	0	0
−10	−0.064	0.0107	0.0213	0.0212	0.4252
−5	−.021	0	.0103	.0206	.2138
−1	0	0	.0101	0	.0401
1	.00993	0	−.0099	0	−.04
5	.029	0	−.0097	−.0097	−.206
10	.0563	−.0094	−.019	−.028	−.405
15	.0818	−.0091	−.018	−.037	−.579
20	.1059	−.018	−.027	−.054	−.765
50	.2176	−.038	−.069	−.101	−1.738
100	.3544	−.067	−.228	−.178	−3.033
120	.3893	−.067	−.12	−.196	−3.455
130	4183	−.076	−.121	−.207	−3.65
150	.4406	−.081	−.134	−.221	−4.013
200	.5021	−.095	−.156	−.257	−4.794
250	.5484	−.103	−.168	−.285	−5.428
300	.5876	−.108	−.181	−.303	−5.952
350	.6161	−.116	−.188	−.318	−6.388
400	.6393	−.0083	−.2	−.336	−6.769
450	.6612	−.122	−.205	−.348	−7.089
500	.6775	−.127	−.211	−.359	−7.372
Luxuries:					
0	0	0	0	0	0
−10	.0611	0	−.01	−.01	.102
−5	.0202	−.01	0	0	.0505
−1	0	0	0	0	.01
1	0	0	0	.00998	−.01
5	−.03	.00991	0	.00899	−.05
10	−.059	.00983	.00981	.00979	−.098
15	−.088	.00974	.00972	.00969	−.146
20	−.106	.00966	.0193	.0192	−.193
50	−.266	.0276	.0365	.0451	−.465
100	−.484	.0425	.0754	.0658	−.856
120	−.561	.0495	.0811	.0795	−1.00
130	−.593	.0488	.0878	.086	−1.064
150	−.671	.0474	.1007	.0983	−1.188
200	−.834	.0664	.1296	.1189	−1.481
250	−.977	.0762	.1481	.1366	−1.73
300	−1.109	.0914	.1706	.152	−1.948
350	−1.221	.0987	.1845	.1712	−2.141
400	−1.328	.1112	.197	.1828	−2.313
450	−1.418	.1112	.2134	.1932	−2.468
500	−1.505	.1219	.2232	.2025	−2.607

index formula used to construct a household-level index.

This empirical and hypothetical analysis used data from the CEX and the CPI, at the greatest level of commodity disaggregation possible. The results show that there is little difference between the democratic and plutocratic index values for the 1987–97 period, and that the one index type need not always exceed the other. Only in extreme scenarios, in which price changes were measured for expenditures on inelastic goods, did the democratic and plutocratic index values show a difference between of about 1 index point for every 10-percent increase in the relative prices of these goods.

A complete examination of this issue would take into consideration other aspects for which empirical information is not presently available:

- Differences in price changes faced by different households, or different demographic groups of households, remains an empirically elusive issue. Unfortunately, data collected for the CPI do not identify the prices paid by survey households for the goods and services they purchase. It is possible that poorer households are restricted in their choice of outlets and, thus, prices they pay for goods, but there is no definitive empirical information on this.
- The treatment of quality change in durable goods can affect the choice of index type. This is especially true for those goods for which the purchase decision may be discrete

(not "how much," but, "do I buy one or not").[7]

- The level of detail at which commodities and services are defined for the CPI also does not allow a fine discrimination of which specific items within a goods category are being purchased by individual survey households. For example, expenditure shares can be derived for steak, but not the grade or the cut (filet mignon or top sirloin). In a very complex economy, such a level of detail would be extremely difficult to capture for price index computation. Yet, it may be at this level of detail that differences in expenditure patterns, and thus the experience of inflation, may differ across household groups.

- The assumption of a fixed weight index, or the choice of which index formula to employ that best describes a household's behavior when it tries to minimize the impact of price increases, can affect the comparison. The expenditure shares observed in a given sample of households during a given survey period might well be different from those of households during another period, under different relative prices and other economic conditions. □

Notes

ACKNOWLEDGMENT: The author would like to thank Rob Cage for supplying data and Mathew Taylor for assisting in the research.

[1] The plutocratic index is an aggregate price index in which the relative level of total expenditures of each household provides the weights. For more information, see W. E. Diewert, "The Theory of the Cost-of-Living Index and the Measurement of Welfare Change," in W. E. Diewert and C. Montmarquette, eds., *Price Level Measurement* (Statistics Canada, 1983), pp. 163–233.

[2] The democratic index is an aggregate price index in which each household's expenditure patterns are equally weighted. For more information, see W. E. Diewert, "The Theory of the Cost-of-Living Index," pp. 163–233.

[3] See *BLS Handbook of Methods*, Bulletin 2490 (Bureau of Labor Statistics, April 1997), p. 167.

[4] The "social welfare function" is a formula that measures the aggregate level of welfare or satisfaction of a group of persons or households. For more detail on this general issue, see R. Pollak, "The Social Cost-of-Living Index," *Journal of Public Economics*, 1981, vol. 26, pp. 126–34.

[5] W. E. Diewert, "The Theory of the Cost-of-Living Index," pp. 163–233.

[6] R. T. Michael, "Variation Across Households in the Rate of Inflation," *Journal of Money, Credit, and Banking*, 1979, vol. 11, pp. 32–46; R. P. Hagemann, "The Variability of Inflation Rates across Household Types," *Journal of Money, Credit, and Banking*, 1982, vol. 14, pp. 494–510; and M. F. Kokoski, "Consumer Price Indices by Demographic Group," BLS Working Paper No. 167 (Bureau of Labor Statistics, April 1987).

[7] T. Erickson, "The Ambiguous Effect of New and Improved Goods on the Cost-of-Living," *Economics Letters*, August 2000, pp. 143–47.

IT improves emergency outcomes

It still often seems difficult to find computers in the macro-productivity figures outside the computer industry itself or the relatively easy-to-measure durable goods manufacturing sector. Indeed, at least one study reviewed for this department indicated that there are specific service-sector applications in which productivity may not be improved by computers. (See the March 2000 Précis.)

On the plus side of the ledger, however, Susan Athey and Scott Stern find significant improvements in emergency services in a recent NBER study, *The Impact of Information Technology on Emergency Health Care Outcomes*. Their study combines information from an original survey of information technology (IT) and job design in emergency call (911) centers with detailed data on virtually all ambulance rides to emergency room admissions in Pennsylvania in 1994 and 1996.

Their results indicate that the adoption of the more IT-intensive "Enhanced 911" systems that link automatic caller identification to a GIS database is associated with significant improvements in the outcomes of cardiac distress calls to the emergency service. These improved outcomes include better intermediate health care at the scene, such as measurement of blood pressure, respiration, and pulse, increased survival rate, and better outcomes in terms of mortality and cost once the patient reaches the hospital.

In a general conclusion about productivity measurement in the service sector, Athey and Stern remark, "In contrast to studies that attempt to evaluate the gains from IT by aggregating across a wide variety of heterogeneous establishments and applications of IT, our approach has been to identify a specific application and to tailor both the measurement of IT and the productivity analysis to fit the application." Perhaps this indicates that as much as quality adjustment is the "house-to-house combat" of price measurement, these detailed studies will be the street-to-street fighting needed to understand service sector productivity.

Social Security's earnings test

In April of this year, the Senior Citizens Freedom to Work Act was signed into law. This new law eliminated the earnings test for recipients of Social Security benefits who are over the normal Social Security retirement age (now 65). The test reduced current payments to recipients whose labor income was above a certain level. While benefits were later increased to make up for such a reduction, the test was often viewed as a tax on earnings. A version of the test still affects recipients aged 62-64, and will affect more as the normal retirement age is raised to 67. Therefore, the test's impact on the behavior of older workers is still of interest.

Jonathan Gruber of Massachusetts Institute of Technology and National Bureau of Economic Research [NBER] and Peter Orszag of Sebago Associates and University of California Berkeley investigate this impact in "Does the Social Security Earnings Test Affect Labor Supply and Benefits Receipt?" (NBER Working Paper 7923). They analyze data from the March Supplement to the Current Population Survey during the 1973–98 period. One noteworthy feature of their analysis is that it studies data on both women and men. Earlier studies of the earnings test have tended to focus solely on men.

Gruber and Orszag find that the earnings test does not have a robust influence on men's labor supply choices. They do find more evidence that suggests that the earnings test affects women's labor supply decisions. Gruber and Orszag's analysis also indicates that removing the earnings test may increase the early receipt of Social Security benefits, which lowers benefit levels. This could raise concerns regarding the standard of living of some of these elderly as they reach very advanced ages.

Productivity and LMDs

What are LMDs and what do they have to do with productivity? A longitudinal micro-level data set (LMD) follows a large number of firms or establishments over a period of time. LMDs allow researchers to conduct certain types of productivity studies that are not possible with aggregate data.

In "Understanding Productivity: Lessons from Longitudinal Microdata" (*Journal of Economic Literature*, September 2000), Eric J. Bartelsman of Free University, Amsterdam and Mark Doms of the Federal Reserve Board of Governors review recent productivity studies that have used LMDs. They pay particular attention to the Longitudinal Research Database (LRD), a large data set of U.S. manufacturing establishments that has been developed by the U.S. Census Bureau. The authors have both worked with the LRD and are quite familiar with it. The LRD combines data from the Census of Manufactures and the Annual Survey of Manufactures. The establishment-level data from the two have been linked starting in 1972 and continuing (as of now) through 1997. Data from supplementary surveys have also been linked to the basic data.

There have been numerous valuable findings from studying productivity with data sets such as the LRD. Among the findings discussed by Bartelsman and Doms is that "the amount of productivity dispersion is extremely large—some firms are substantially more productive than others." They also note that "a large portion of aggregate productivity growth is attributable to resource reallocation. The manufacturing sector is characterized by large shifts in employment and output across establishments every year—the aggregate data belie the tremendous amount of turmoil underneath." □

Economies in crisis

The Return of Depression Economics. By Paul Krugman. New York, New York, W. W. Norton and Company, 1999, 176 pp. $23.95.

This interesting yet very complicated book offers a tour of the major economic crises which have spread across the world in the 1990s, including those of East Asia, Brazil, Mexico, and Russia. Paul Krugman provides pithy accounts of the devaluation of Thailand's baht currency, the "financial doomsday machine" created by hedge funds, and the "liquidity trap" of the Japanese economy.

This economics professor at the M.I.T. maintains that while the world economy is not and probably will not be in depression in the near future, "depression economics" policies have staged a comeback. Krugman draws analogies between factors behind the economic crises that afflicted East Asia (including South Korea, Thailand, and Indonesia), Brazil, Mexico, and Russia in recent years, and factors behind the Great Depression in this country during the 1930s. He characterizes the Great Depression as a condition created by a collapse in aggregate demand that was prolonged by inaction of the Federal Reserve (Fed) and the Hoover Administration. He points out that the Fed could have ended the Great Depression by dramatically increasing the money supply. The author points out the irony in how the International Monetary Fund (IMF), the last-resort lender to national governments, has apparently not learned from the mistakes of the 1930s. In an effort to satisfy investors, the IMF has traditionally required fiscal and monetary austerity in the countries it lends to. Krugman says this policy of tight national budgets and tight money supplies is folly, reminiscent of economic conditions in this country during the Hoover Administration, conditions which prolonged the Great Depression.

When countries experiencing economic crises desperately need loans from the IMF, they have routinely been required to raise interest rates to extremely high levels (to appeal to creditors), increase taxes, reduce national spending, and wait for the economy to improve. The author points out that the IMF's recession-fighting policies are the opposite of those of this country during post-World War II recessions. He asserts that IMF requirements for double-digit interest rates and reduced national spending in countries experiencing recessions is ironically a guaranteed strategy for a prolonged, severe recession.

The author proposes that countries whose economies have suffered from investor panic and capital flight should avoid implementing austerity measures of the IMF. Instead, these countries should apply emergency controls on outflows of short-term, liquid capital investments. Moreover, the author recommends that countries tax companies that borrow in foreign currency. Accordingly, countries experiencing a reduction in demand for exports may then be able to allow the value of their currencies to slide, yet avoid provoking a financial collapse.

Devaluing one's currency is an easy way for a country to reduce the price of its products when faced with a sudden reduction in demand for them. However, collapsing currencies end up bankrupting local businesses and banks who have borrowed in foreign currencies, because the currencies they must repay are much more expensive.

The book analyzes economic crises of selected countries in the 1990s. These include the currency crises of East Asia in 1997 and 1998, the Japanese recession of the 1990s, the Brazilian financial panics of 1998 and 1999, and the collapse of the Mexican peso and other Latin American currencies during 1994 and 1995. The most interesting parts of the book examine the factors behind East Asia's economic woes, including those of Japan.

Krugman's main explanation for most of these crises involves the increased proliferation of liquid financial investments made in "emerging markets" from investors abroad. Sudden shifts in international investor sentiments, resulting from irrational, herd mentalities of international investors, have wreaked havoc on emerging markets. For decades governments have removed regulatory restraints on domestic and international trade. International investment fund traders tend to change opinions suddenly, withdrawing liquid, indirect investments from developing markets in a panic.

The main villains in this book are the U.S. "hedge funds," investment institutions that control assets around the world, well in excess of the respective investors' wealth. Such assets include foreign currencies, stocks, bonds, and real estate. Reputable hedge funds have, in recent years, been able to make investments that are up to 100 times the size of their owners' investment. Therefore, a relatively small drop in asset prices can result in huge losses for hedge-fund investors and corresponding panic and capital flight. According to Krugman, "the competition among hedge funds to exploit ever narrower profit opportunities had created a sort of financial doomsday machine."

Despite the speculative bubble that developed in East Asia in the late 1990s, the author contends that the region's growth was real and solid and was not based on just borrowed funds. From the start of the East Asian "economic miracle" until the early 1990s, the economic growth of that area was for the most part financed by a pay-as-you-go basis, with little money borrowed from abroad. The small amount of money that was borrowed was invested mainly as direct foreign investment for building plants for manufacturing exports.

In 1990, private investments made in "emerging markets," including those of South Korea, Thailand, Indonesia, and Mexico, totaled $42 billion. By 1997, pri-

vate capital flows had ballooned to $256 billion. In the early 1990s, most of the money was invested in Mexico and the rest of Latin America. However, after 1994, an increasing share was invested in the economies of Southeast Asia.

The July 1997 devaluation of Thailand's "baht" currency set into motion depreciating financial and real estate asset values that spread across much of Asia. From 1996 to the first half of 1997, an increasing number of speculative investments in Thai real estate and stocks, financed by external lenders, deflated in value. Consequently, foreign lenders increasingly stopped lending money to Thailand.

The loss in investor confidence quickly spread from Thailand to Malaysia, Indonesia, South Korea, and Japan. By 1998, all of these countries were experiencing recessions. As far as international investors were concerned, financial losses in one Asian economy were a precursor for more in other Asian economies. However, these economies were only marginally linked, engaging in a relatively small amount of trade with neighboring countries. Increasingly though, lenders avoided lending to these countries, and real estate, stock, and currency values plummeted.

Between 1953 and 1973, the Japanese economy transformed itself like no other in history. The country changed from a mostly agricultural country to the "world's largest exporter of steel and automobiles." But since 1991, the Japanese economy has languished in a recession. Krugman notes that Japan produced less in 1998 than in 1991. During the 1990s, Japan, to no avail, repeatedly applied the two standard remedies for increasing consumer demand and ending a recession. Its government lowered interest rates and increased government spending.

After its bubble economy burst, Japan eventually lowered interest rates to near 0 percent. But the economy and consumer demand continued to slump. Throughout the 1990s, the Japanese government borrowed money and invested in public works projects, such as roads and bridges, even when many agreed they were not needed. In 1998, Japan projected a deficit equal to 10 percent of its GDP. But the successes of the stimulus policies have been short lived.

Japan is caught in a "liquidity trap," a condition in which the public chooses to hold any amount of money that is supplied. Maybe due to its aging population, or maybe due to fear of its future economy, Japanese consumers have not been willing to increase spending to the point of approaching their economy's capacity.

Krugman suggests that the answer to Japan's liquidity trap may be the expectation of inflation. Since 1994, consumer inflation in Japan has remained near 0 percent. For the 12-month period ended April 2000, Japanese consumer prices decreased 0.8 percent. The author suggests that the Japanese government created inflation by drastically increasing the money supply, and convinced the public that consumer inflation is here to stay. Perhaps when its citizens expect annual inflation of 3 to 4 percent over many years, and when they expect the purchasing power of their yen will be less next month or next year, they will hoard less yen and increase spending and borrowing.

I recommend this book to readers who understand the fundamental theories of international finance and macroeconomics.

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This section of the *Review* presents the principal statistical series collected and calculated by the Bureau of Labor Statistics: series on labor force; employment; unemployment; labor compensation; consumer, producer, and international prices; productivity; international comparisons; and injury and illness statistics. In the notes that follow, the data in each group of tables are briefly described; key definitions are given; notes on the data are set forth; and sources of additional information are cited.

General notes

The following notes apply to several tables in this section:

Seasonal adjustment. Certain monthly and quarterly data are adjusted to eliminate the effect on the data of such factors as climatic conditions, industry production schedules, opening and closing of schools, holiday buying periods, and vacation practices, which might prevent short-term evaluation of the statistical series. Tables containing data that have been adjusted are identified as "seasonally adjusted." (All other data are not seasonally adjusted.) Seasonal effects are estimated on the basis of past experience. When new seasonal factors are computed each year, revisions may affect seasonally adjusted data for several preceding years.

Seasonally adjusted data appear in tables 1–14, 16–17, 39, and 43. Seasonally adjusted labor force data in tables 1 and 4–9 were revised in the February 2000 issue of the *Review*. Seasonally adjusted establishment survey data shown in tables 1, 12–14 and 16–17 were revised in the July 2000 *Review* and reflect the experience through March 2000. A brief explanation of the seasonal adjustment methodology appears in "Notes on the data."

Revisions in the productivity data in table 45 are usually introduced in the September issue. Seasonally adjusted indexes and percent changes from month-to-month and quarter-to-quarter are published for numerous Consumer and Producer Price Index series. However, seasonally adjusted indexes are not published for the U.S. average All-Items CPI. Only seasonally adjusted percent changes are available for this series.

Adjustments for price changes. Some data—such as the "real" earnings shown in table 14—are adjusted to eliminate the effect of changes in price. These adjustments are made by dividing current-dollar values by the Consumer Price Index or the appropriate component of the index, then multiplying by 100. For example, given a current hourly wage rate of $3 and a current price index number of 150, where 1982 = 100, the hourly rate expressed in 1982 dollars is $2 ($3/150 x 100 = $2). The $2 (or any other resulting values) are described as "real," "constant," or "1982" dollars.

Sources of information

Data that supplement the tables in this section are published by the Bureau in a variety of sources. Definitions of each series and notes on the data are contained in later sections of these Notes describing each set of data. For detailed descriptions of each data series, see *BLS Handbook of Methods*, Bulletin 2490. Users also may wish to consult *Major Programs of the Bureau of Labor Statistics*, Report 919. News releases provide the latest statistical information published by the Bureau; the major recurring releases are published according to the schedule appearing on the back cover of this issue.

More information about labor force, employment, and unemployment data and the household and establishment surveys underlying the data are available in the Bureau's monthly publication, *Employment and Earnings*. Historical unadjusted and seasonally adjusted data from the household survey are available on the Internet:

http://stats.bls.gov/cpshome.htm

Historically comparable unadjusted and seasonally adjusted data from the establishment survey also are available on the Internet:

http://stats.bls.gov/ceshome.htm

Additional information on labor force data for areas below the national level are provided in the BLS annual report, *Geographic Profile of Employment and Unemployment.*

For a comprehensive discussion of the Employment Cost Index, see *Employment Cost Indexes and Levels, 1975–95*, BLS Bulletin 2466. The most recent data from the Employee Benefits Survey appear in the following Bureau of Labor Statistics bulletins: *Employee Benefits in Medium and Large Firms; Employee Benefits in Small Private Establishments;* and *Employee Benefits in State and Local Governments.*

More detailed data on consumer and producer prices are published in the monthly periodicals, *The CPI Detailed Report* and *Producer Price Indexes*. For an overview of the 1998 revision of the CPI, see the December 1996 issue of the *Monthly Labor Review*. Additional data on international prices appear in monthly news releases.

Listings of industries for which productivity indexes are available may be found on the Internet:

http://stats.bls.gov/iprhome.htm

For additional information on international comparisons data, see *International Comparisons of Unemployment*, BLS Bulletin 1979.

Detailed data on the occupational injury and illness series are published in *Occupational Injuries and Illnesses in the United States, by Industry,* a BLS annual bulletin.

Finally, the *Monthly Labor Review* carries analytical articles on annual and longer term developments in labor force, employment, and unemployment; employee compensation and collective bargaining; prices; productivity; international comparisons; and injury and illness data.

Symbols

n.e.c. = not elsewhere classified.
n.e.s. = not elsewhere specified.
p = preliminary. To increase the timeliness of some series, preliminary figures are issued based on representative but incomplete returns.
r = revised. Generally, this revision reflects the availability of later data, but also may reflect other adjustments.

Comparative Indicators

(Tables 1–3)

Comparative indicators tables provide an overview and comparison of major BLS statistical series. Consequently, although many of the included series are available monthly, all measures in these comparative tables are presented quarterly and annually.

Labor market indicators include employment measures from two major surveys and information on rates of change in compensation provided by the Employment Cost Index (ECI) program. The labor force participation rate, the employment-to-population ratio, and unemployment rates for major demographic groups based on the Current Population ("household") Survey are presented, while measures of employment and average weekly hours by major industry sector are given using nonfarm payroll data. The Employment Cost Index (compensation), by major sector and by bargaining status, is chosen from a variety of BLS compensation and wage measures because it provides a comprehensive measure of employer costs for hiring labor, not just outlays for wages, and it is not affected by employment shifts among occupations and industries.

Data on **changes in compensation, prices, and productivity** are presented in table 2.

Measures of rates of change of compensation and wages from the Employment Cost Index program are provided for all civilian nonfarm workers (excluding Federal and household workers) and for all private nonfarm workers. Measures of changes in consumer prices for all urban consumers; producer prices by stage of processing; overall prices by stage of processing; and overall export and import price indexes are given. Measures of productivity (output per hour of all persons) are provided for major sectors.

Alternative measures of wage and compensation rates of change, which reflect the overall trend in labor costs, are summarized in table 3. Differences in concepts and scope, related to the specific purposes of the series, contribute to the variation in changes among the individual measures.

Notes on the data

Definitions of each series and notes on the data are contained in later sections of these notes describing each set of data.

Employment and Unemployment Data

(Tables 1; 4–20)

Household survey data

Description of the series

EMPLOYMENT DATA in this section are obtained from the Current Population Survey, a program of personal interviews conducted monthly by the Bureau of the Census for the Bureau of Labor Statistics. The sample consists of about 50,000 households selected to represent the U.S. population 16 years of age and older. Households are interviewed on a rotating basis, so that three-fourths of the sample is the same for any 2 consecutive months.

Definitions

Employed persons include (1) all those who worked for pay any time during the week which includes the 12th day of the month or who worked unpaid for 15 hours or more in a family-operated enterprise and (2) those who were temporarily absent from their regular jobs because of illness, vacation, industrial dispute, or similar reasons. A person working at more than one job is counted only in the job at which he or she worked the greatest number of hours.

Unemployed persons are those who did not work during the survey week, but were available for work except for temporary illness and had looked for jobs within the preceding 4 weeks. Persons who did not look for work because they were on layoff are also counted among the unemployed. **The unemployment rate** represents the number unemployed as a percent of the civilian labor force.

The **civilian labor force** consists of all employed or unemployed persons in the civilian noninstitutional population. Persons **not in the labor force** are those not classified as employed or unemployed. This group includes discouraged workers, defined as persons who want and are available for a job and who have looked for work sometime in the past 12 months (or since the end of their last job if they held one within the past 12 months), but are not currently looking, because they believe there are no jobs available or there are none for which they would qualify. The **civilian noninstitutional population** comprises all persons 16 years of age and older who are not inmates of penal or mental institutions, sanitariums, or homes for the aged, infirm, or needy. The **civilian labor force participation** rate is the proportion of the civilian noninstitutional population that is in the labor force. The **employment-population ratio** is employment as a percent of the civilian noninstitutional population.

Notes on the data

From time to time, and especially after a decennial census, adjustments are made in the Current Population Survey figures to correct for estimating errors during the intercensal years. These adjustments affect the comparability of historical data. A description of these adjustments and their effect on the various data series appears in the Explanatory Notes of *Employment and Earnings*.

Data beginning in 2000 are not strictly comparable with data for 1999 and earlier years because of the introduction of revised population controls. Additional information appears in the February 2000 issue of *Employment and Earnings*.

Labor force data in tables 1 and 4–9 are seasonally adjusted. Since January 1980, national labor force data have been seasonally adjusted with a procedure called X-11 ARIMA which was developed at Statistics Canada as an extension of the standard X-11 method previously used by BLS. A detailed description of the procedure appears in the X-11 *ARIMA Seasonal Adjustment Method,* by Estela Bee Dagum (Statistics Canada, Catalogue No. 12-564E, January 1983).

At the beginning of each calendar year, historical seasonally adjusted data usually are revised, and projected seasonal adjustment factors are calculated for use during the January–June period. The historical seasonally adjusted data usually are revised for only the most recent 5 years. In July, new seasonal adjustment factors, which incorporate the experience through June, are produced for the July–December period, but no revisions are made in the historical data.

FOR ADDITIONAL INFORMATION on national household survey data, contact the Division of Labor Force Statistics: (202) 691–6378.

Establishment survey data

Description of the series

EMPLOYMENT, HOURS, AND EARNINGS DATA in this section are compiled from payroll records reported monthly on a voluntary basis to the Bureau of Labor Statistics and its cooperating State agencies by about 300,000 establishments representing all industries except agriculture. Industries are classified in accordance with the 1987 *Standard Industrial Classification (SIC) Manual.* In most industries, the sampling probabilities are based on the size of the establishment; most large establishments are therefore in the sample. (An establishment is not necessarily a firm; it may be a branch plant, for example, or warehouse.) Self-employed persons and others not on a regular civilian payroll are outside the scope of the survey because they are excluded from establishment records. This largely accounts for the difference in employment figures between the household and establishment surveys.

Definitions

An **establishment** is an economic unit which produces goods or services (such as a factory or store) at a single location and is engaged in one type of economic activity.

Employed persons are all persons who received pay (including holiday and sick pay) for any part of the payroll period including the 12th day of the month. Persons holding more than one job (about 5 percent of all persons in the labor force) are counted in each establishment which reports them.

Production workers in manufacturing include working supervisors and nonsupervisory workers closely associated with production operations. Those workers mentioned in tables 11–16 include production workers in manufacturing and mining; construction workers in construction; and nonsupervisory workers in the following industries: transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for about four-fifths of the total em-

ployment on private nonagricultural payrolls.

Earnings are the payments production or nonsupervisory workers receive during the survey period, including premium pay for overtime or late-shift work but excluding irregular bonuses and other special payments. **Real earnings** are earnings adjusted to reflect the effects of changes in consumer prices. The deflator for this series is derived from the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W).

Hours represent the average weekly hours of production or nonsupervisory workers for which pay was received, and are different from standard or scheduled hours. **Overtime hours** represent the portion of average weekly hours which was in excess of regular hours and for which overtime premiums were paid.

The **Diffusion Index** represents the percent of industries in which employment was rising over the indicated period, plus one-half of the industries with unchanged employment; 50 percent indicates an equal balance between industries with increasing and decreasing employment. In line with Bureau practice, data for the 1-, 3-, and 6-month spans are seasonally adjusted, while those for the 12-month span are unadjusted. Data are centered within the span. Table 17 provides an index on private nonfarm employment based on 356 industries, and a manufacturing index based on 139 industries. These indexes are useful for measuring the dispersion of economic gains or losses and are also economic indicators.

Notes on the data

Establishment survey data are annually adjusted to comprehensive counts of employment (called "benchmarks"). The latest adjustment, which incorporated March 1999 benchmarks, was made with the release of May 2000 data, published in the July 2000 issue of the *Review*. Coincident with the benchmark adjustment, historical seasonally adjusted data were revised to reflect updated seasonal factors. Unadjusted data from April 1999 forward and seasonally adjusted data from January 1996 forward are subject to revision in future benchmarks.

In addition to the routine benchmark revisions and updated seasonal factors introduced with the release of the May 2000 data, all estimates for the wholesale trade division from April 1998 forward were revised to incorporate a new sample design. This represented the first major industry division to convert to a probability-based sample under a 4-year phase-in plan for the establishment survey sample redesign project. For additional information, see the the June 2000 issue of *Employment and Earnings*.

Revisions in State data (table 11) occurred with the publication of January 2000 data.

Beginning in June 1996, the BLS uses the X-12 ARIMA methodology to seasonally adjust establishment survey data. This procedure, developed by the Bureau of the Census, controls for the effect of varying survey intervals (also known as the 4- versus 5-week effect), thereby providing improved measurement of over-the-month changes and underlying economic trends. Revisions of data, usually for the most recent 5-year period, are made once a year coincident with the benchmark revisions.

In the establishment survey, estimates for the most recent 2 months are based on incomplete returns and are published as preliminary in the tables (12–17 in the *Review*). When all returns have been received, the estimates are revised and published as "final" (prior to any benchmark revisions) in the third month of their appearance. Thus, December data are published as preliminary in January and February and as final in March. For the same reasons, quarterly establishment data (table 1) are preliminary for the first 2 months of publication and final in the third month. Thus, fourth-quarter data are published as preliminary in January and February and as final in March.

FOR ADDITIONAL INFORMATION on establishment survey data, contact the Division of Monthly Industry Employment Statistics: (202) 691–6555.

Unemployment data by State

Description of the series

Data presented in this section are obtained from the Local Area Unemployment Statistics (LAUS) program, which is conducted in cooperation with State employment security agencies.

Monthly estimates of the labor force, employment, and unemployment for States and sub-State areas are a key indicator of local economic conditions, and form the basis for determining the eligibility of an area for benefits under Federal economic assistance programs such as the Job Training Partnership Act. Seasonally adjusted unemployment rates are presented in table 10. Insofar as possible, the concepts and definitions underlying these data are those used in the national estimates obtained from the CPS.

Notes on the data

Data refer to State of residence. Monthly data for all States and the District of Columbia are derived using standardized procedures established by BLS. Once a year, estimates are revised to new population controls, usually with publication of January estimates, and benchmarked to annual average CPS levels.

FOR ADDITIONAL INFORMATION on data in this series, call (202) 691–6392 (table 10) or (202) 691–6559 (table 11).

Compensation and Wage Data

(Tables 1–3; 21–27)

COMPENSATION AND WAGE DATA are gathered by the Bureau from business establishments, State and local governments, labor unions, collective bargaining agreements on file with the Bureau, and secondary sources.

Employment Cost Index

Description of the series

The **Employment Cost Index** (ECI) is a quarterly measure of the rate of change in compensation per hour worked and includes wages, salaries, and employer costs of employee benefits. It uses a fixed market basket of labor—similar in concept to the Consumer Price Index's fixed market basket of goods and services—to measure change over time in employer costs of employing labor.

Statistical series on total compensation costs, on wages and salaries, and on benefit costs are available for private nonfarm workers excluding proprietors, the self-employed, and household workers. The total compensation costs and wages and salaries series are also available for State and local government workers and for the civilian nonfarm economy, which consists of private industry and State and local government workers combined. Federal workers are excluded.

The Employment Cost Index probability sample consists of about 4,400 private nonfarm establishments providing about 23,000 occupational observations and 1,000 State and local government establishments providing 6,000 occupational observations selected to represent total employment in each sector. On average, each reporting unit provides wage and compensation information on five well-specified occupations. Data are collected each quarter for the pay period including the 12th day of March, June, September, and December.

Beginning with June 1986 data, fixed employment weights from the 1980 Census of Population are used each quarter to calculate the civilian and private indexes and the index for State and local governments. (Prior to June 1986, the employment weights are from the 1970 Census of Population.) These fixed weights, also used to derive all of the industry and occupation series indexes, ensure that changes in these indexes reflect only changes in compensation, not employment shifts among indus-

tries or occupations with different levels of wages and compensation. For the bargaining status, region, and metropolitan/non-metropolitan area series, however, employment data by industry and occupation are not available from the census. Instead, the 1980 employment weights are reallocated within these series each quarter based on the current sample. Therefore, these indexes are not strictly comparable to those for the aggregate, industry, and occupation series.

Definitions

Total compensation costs include wages, salaries, and the employer's costs for employee benefits.

Wages and salaries consist of earnings before payroll deductions, including production bonuses, incentive earnings, commissions, and cost-of-living adjustments.

Benefits include the cost to employers for paid leave, supplemental pay (including nonproduction bonuses), insurance, retirement and savings plans, and legally required benefits (such as Social Security, workers' compensation, and unemployment insurance).

Excluded from wages and salaries and employee benefits are such items as payment-in-kind, free room and board, and tips.

Notes on the data

The Employment Cost Index for changes in wages and salaries in the private nonfarm economy was published beginning in 1975. Changes in total compensation cost—wages and salaries and benefits combined—were published beginning in 1980. The series of changes in wages and salaries and for total compensation in the State and local government sector and in the civilian nonfarm economy (excluding Federal employees) were published beginning in 1981. Historical indexes (June 1981=100) are available on the Internet:

http://stats.bls.gov/ecthome.htm

FOR ADDITIONAL INFORMATION on the Employment Cost Index, contact the Office of Compensation Levels and Trends: (202) 691–6199.

Employee Benefits Survey

Description of the series

Employee benefits data are obtained from the Employee Benefits Survey, an annual survey of the incidence and provisions of selected benefits provided by employers. The survey collects data from a sample of approximately 9,000 private sector and State and local government establishments. The data are presented as a percentage of employees who participate in a certain benefit, or as an average benefit provision (for example, the average number of paid holidays provided to employees per year). Selected data from the survey are presented in table 25 for medium and large private establishments and in table 26 for small private establishments and State and local government.

The survey covers paid leave benefits such as holidays and vacations, and personal, funeral, jury duty, military, family, and sick leave; short-term disability, long-term disability, and life insurance; medical, dental, and vision care plans; defined benefit and defined contribution plans; flexible benefits plans; reimbursement accounts; and unpaid family leave.

Also, data are tabulated on the incidence of several other benefits, such as severance pay, child-care assistance, wellness programs, and employee assistance programs.

Definitions

Employer-provided benefits are benefits that are financed either wholly or partly by the employer. They may be sponsored by a union or other third party, as long as there is some employer financing. However, some benefits that are fully paid for by the employee also are included. For example, long-term care insurance and postretirement life insurance paid entirely by the employee are included because the guarantee of insurability and availability at group premium rates are considered a benefit.

Participants are workers who are covered by a benefit, whether or not they use that benefit. If the benefit plan is financed wholly by employers and requires employees to complete a minimum length of service for eligibility, the workers are considered participants whether or not they have met the requirement. If workers are required to contribute towards the cost of a plan, they are considered participants only if they elect the plan and agree to make the required contributions.

Defined benefit pension plans use predetermined formulas to calculate a retirement benefit (if any), and obligate the employer to provide those benefits. Benefits are generally based on salary, years of service, or both.

Defined contribution plans generally specify the level of employer and employee contributions to a plan, but not the formula for determining eventual benefits. Instead, individual accounts are set up for participants, and benefits are based on amounts credited to these accounts.

Tax-deferred savings plans are a type of defined contribution plan that allow participants to contribute a portion of their salary to an employer-sponsored plan and defer income taxes until withdrawal.

Flexible benefit plans allow employees to choose among several benefits, such as life insurance, medical care, and vacation days, and among several levels of coverage within a given benefit.

Notes on the data

Surveys of employees in medium and large establishments conducted over the 1979–86 period included establishments that employed at least 50, 100, or 250 workers, depending on the industry (most service industries were excluded). The survey conducted in 1987 covered only State and local governments with 50 or more employees. The surveys conducted in 1988 and 1989 included medium and large establishments with 100 workers or more in private industries. All surveys conducted over the 1979–89 period excluded establishments in Alaska and Hawaii, as well as part-time employees.

Beginning in 1990, surveys of State and local governments and small private establishments were conducted in even-numbered years, and surveys of medium and large establishments were conducted in odd-numbered years. The small establishment survey includes all private nonfarm establishments with fewer than 100 workers, while the State and local government survey includes all governments, regardless of the number of workers. All three surveys include full- and part-time workers, and workers in all 50 States and the District of Columbia.

FOR ADDITIONAL INFORMATION on the Employee Benefits Survey, contact the Office of Compensation Levels and Trends on the Internet:

http://stats.bls.gov/ebshome.htm

Work stoppages

Description of the series

Data on work stoppages measure the number and duration of major strikes or lockouts (involving 1,000 workers or more) occurring during the month (or year), the number of workers involved, and the amount of work time lost because of stoppage. These data are presented in table 27.

Data are largely from a variety of published sources and cover only establishments directly involved in a stoppage. They do not measure the indirect or secondary effect of stoppages on other establishments whose employees are idle owing to material shortages or lack of service.

Definitions

Number of stoppages: The number of strikes and lockouts involving 1,000 workers or more and lasting a full shift or longer.

Workers involved: The number of workers directly involved in the stoppage.

Number of days idle: The aggregate number of workdays lost by workers involved in the stoppages.

Days of idleness as a percent of estimated working time: Aggregate workdays lost as a percent of the aggregate number of standard workdays in the period multiplied by total employment in the period.

Notes on the data

This series is not comparable with the one terminated in 1981 that covered strikes involving six workers or more.

FOR ADDITIONAL INFORMATION on work stoppages data, contact the Office of Compensation and Working Conditions: (202) 691–6282, or the Internet:

http://stats.bls.gov/cbahome.htm

Price Data

(Tables 2; 28–38)

PRICE DATA are gathered by the Bureau of Labor Statistics from retail and primary markets in the United States. Price indexes are given in relation to a base period—1982 = 100 for many Producer Price Indexes, 1982–84 = 100 for many Consumer Price Indexes (unless otherwise noted), and 1990 = 100 for International Price Indexes.

Consumer Price Indexes

Description of the series

The **Consumer Price Index** (CPI) is a measure of the average change in the prices paid by urban consumers for a fixed market basket of goods and services. The CPI is calculated monthly for two population groups, one consisting only of urban households whose primary source of income is derived from the employment of wage earners and clerical workers, and the other consisting of all urban households. The wage earner index (CPI-W) is a continuation of the historic index that was introduced well over a half-century ago for use in wage negotiations. As new uses were developed for the CPI in recent years, the need for a broader and more representative index became apparent. The all-urban consumer index (CPI-U), introduced in 1978, is representative of the 1993–95 buying habits of about 87 percent of the noninstitutional population of the United States at that time, compared with 32 percent represented in the CPI-W. In addition to wage earners and clerical workers, the CPI-U covers professional, managerial, and technical workers, the self-employed, short-term workers, the unemployed, retirees, and others not in the labor force.

The CPI is based on prices of food, clothing, shelter, fuel, drugs, transportation fares, doctors' and dentists' fees, and other goods and services that people buy for day-to-day living. The quantity and quality of these items are kept essentially unchanged between major revisions so that only price changes will be measured. All taxes directly associated with the purchase and use of items are included in the index.

Data collected from more than 23,000 retail establishments and 5,800 housing units in 87 urban areas across the country are used to develop the "U.S. city average." Separate estimates for 14 major urban centers are presented in table 29. The areas listed are as indicated in footnote 1 to the table. The area indexes measure only the average change in prices for each area since the base period, and do not indicate differences in the level of prices among cities.

Notes on the data

In January 1983, the Bureau changed the way in which homeownership costs are meaured for the CPI-U. A rental equivalence method replaced the asset-price approach to homeownership costs for that series. In January 1985, the same change was made in the CPI-W. The central purpose of the change was to separate shelter costs from the investment component of home-ownership so that the index would reflect only the cost of shelter services provided by owner-occupied homes. An updated CPI-U and CPI-W were introduced with release of the January 1987 and January 1998 data.

FOR ADDITIONAL INFORMATION on consumer prices, contact the Division of Consumer Prices and Price Indexes: (202) 691–7000.

Producer Price Indexes

Description of the series

Producer Price Indexes (PPI) measure average changes in prices received by domestic producers of commodities in all stages of processing. The sample used for calculating these indexes currently contains about 3,200 commodities and about 80,000 quotations per month, selected to represent the movement of prices of all commodities produced in the manufacturing; agriculture, forestry, and fishing; mining; and gas and electricity and public utilities sectors. The stage-of-processing structure of PPI organizes products by class of buyer and degree of fabrication (that is, finished goods, intermediate goods, and crude materials). The traditional commodity structure of PPI organizes products by similarity of end use or material composition. The industry and product structure of PPI organizes data in accordance with the Standard Industrial Classification (SIC) and the product code extension of the SIC developed by the U.S. Bureau of the Census.

To the extent possible, prices used in calculating Producer Price Indexes apply to the first significant commercial transaction in the United States from the production or central marketing point. Price data are generally collected monthly, primarily by mail questionnaire. Most prices are obtained directly from producing companies on a voluntary and confidential basis. Prices generally are reported for the Tuesday of the week containing the 13th day of the month.

Since January 1992, price changes for the various commodities have been averaged together with implicit quantity weights representing their importance in the total net selling value of all commodities as of 1987. The detailed data are aggregated to obtain indexes for stage-of-processing groupings, commodity groupings, durability-of-product groupings, and a number of special composite groups. All Producer Price Index data are subject to revision 4 months after original publication.

FOR ADDITIONAL INFORMATION on producer prices, contact the Division of Industrial Prices and Price Indexes: (202) 691–7705.

International Price Indexes

Description of the series

The **International Price Program** produces monthly and quarterly export and import price indexes for nonmilitary goods traded between the United States and the rest of the world. The export price index provides a measure of price change for all products sold by U.S. residents to foreign buyers. ("Residents" is defined as in the national income accounts; it includes corporations, businesses, and individuals, but does not require the organizations to be U.S. owned nor the individuals to have U.S. citizenship.) The import price index provides a measure of price change for goods purchased from other countries by U.S. residents.

The product universe for both the import and export indexes includes raw materials, agricultural products, semifinished manufactures, and finished manufactures, including both capital and consumer goods. Price data for these items are collected primarily by mail questionnaire. In nearly all cases, the data are collected directly from the exporter or importer, although in a few cases, prices are obtained from other sources.

To the extent possible, the data gathered refer to prices at the U.S. border for exports and at either the foreign border or the U.S.

border for imports. For nearly all products, the prices refer to transactions completed during the first week of the month. Survey respondents are asked to indicate all discounts, allowances, and rebates applicable to the reported prices, so that the price used in the calculation of the indexes is the actual price for which the product was bought or sold.

In addition to general indexes of prices for U.S. exports and imports, indexes are also published for detailed product categories of exports and imports. These categories are defined according to the five-digit level of detail for the Bureau of Economic Analysis End-use Classification (SITC), and the four-digit level of detail for the Harmonized System. Aggregate import indexes by country or region of origin are also available.

BLS publishes indexes for selected categories of internationally traded services, calculated on an international basis and on a balance-of-payments basis.

Notes on the data

The export and import price indexes are weighted indexes of the Laspeyres type. Price relatives are assigned equal importance within each harmonized group and are then aggregated to the higher level. The values assigned to each weight category are based on trade value figures compiled by the Bureau of the Census. The trade weights currently used to compute both indexes relate to 1990.

Because a price index depends on the same items being priced from period to period, it is necessary to recognize when a product's specifications or terms of transaction have been modified. For this reason, the Bureau's questionnaire requests detailed descriptions of the physical and functional characteristics of the products being priced, as well as information on the number of units bought or sold, discounts, credit terms, packaging, class of buyer or seller, and so forth. When there are changes in either the specifications or terms of transaction of a product, the dollar value of each change is deleted from the total price change to obtain the "pure" change. Once this value is determined, a linking procedure is employed which allows for the continued repricing of the item.

For the export price indexes, the preferred pricing is f.a.s. (free alongside ship) U.S. port of exportation. When firms report export prices f.o.b. (free on board), production point information is collected which enables the Bureau to calculate a shipment cost to the port of exportation. An attempt is made to collect two prices for imports. The first is the import price f.o.b. at the foreign port of exportation, which is consistent with the basis for valuation of imports in the national accounts. The second is the import price c.i.f.(costs, insurance, and freight) at the U.S. port of importation, which also includes the other costs associated with bringing the product to the U.S. border. It does not, however, include duty charges. For a given product, only one price basis series is used in the construction of an index.

FOR ADDITIONAL INFORMATION on international prices, contact the Division of International Prices: (202) 691–7155.

Productivity Data

(Tables 2; 39–42)

Business sector and major sectors

Description of the series

The productivity measures relate real output to real input. As such, they encompass a family of measures which include single-factor input measures, such as output per hour, output per unit of labor input, or output per unit of capital input, as well as measures of multifactor productivity (output per unit of combined labor and capital inputs). The Bureau indexes show the change in output relative to changes in the various inputs. The measures cover the business, nonfarm business, manufacturing, and nonfinancial corporate sectors.

Corresponding indexes of hourly compensation, unit labor costs, unit nonlabor payments, and prices are also provided.

Definitions

Output per hour of all persons (labor productivity) is the quantity of goods and services produced per hour of labor input. **Output per unit of capital services** (capital productivity) is the quantity of goods and services produced per unit of capital services input. **Multifactor productivity** is the quantity of goods and services produced per combined inputs. For private business and private nonfarm business, inputs include labor and capital units. For manufacturing, inputs include labor, capital, energy, non-energy materials, and purchased business services.

Compensation per hour is total compensation divided by hours at work. Total compensation equals the wages and salaries of employees plus employers' contributions for social insurance and private benefit plans, plus an estimate of these payments for the self-employed (except for nonfinancial corporations in which there are no self-employed). **Real compensation per hour** is compensation per hour deflated by the change in the Consumer Price Index for All Urban Consumers.

Unit labor costs are the labor compensation costs expended in the production of a unit of output and are derived by dividing compensation by output. **Unit nonlabor payments** include profits, depreciation, interest, and indirect taxes per unit of output. They are computed by subtracting compensation of all persons from current-dollar value of output and dividing by output.

Unit nonlabor costs contain all the components of unit nonlabor payments except unit profits.

Unit profits include corporate profits with inventory valuation and capital consumption adjustments per unit of output.

Hours of all persons are the total hours at work of payroll workers, self-employed persons, and unpaid family workers.

Labor inputs are hours of all persons adjusted for the effects of changes in the education and experience of the labor force.

Capital services are the flow of services from the capital stock used in production. It is developed from measures of the net stock of physical assets—equipment, structures, land, and inventories—weighted by rental prices for each type of asset.

Combined units of labor and capital inputs are derived by combining changes in labor and capital input with weights which represent each component's share of total cost. Combined units of labor, capital, energy, materials, and purchased business services are similarly derived by combining changes in each input with weights that represent each input's share of total costs. The indexes for each input and for combined units are based on changing weights which are averages of the shares in the current and preceding year (the Tornquist index-number formula).

Notes on the data

Business sector output is an annually-weighted index constructed by excluding from real gross domestic product (GDP) the following outputs: general government, nonprofit institutions, paid employees of private households, and the rental value of owner-occupied dwellings. Nonfarm business also excludes farming. Private business and private nonfarm business further exclude government enterprises. The measures are supplied by the U.S. Department of Commerce's Bureau of Economic Analysis. Annual estimates of manufacturing sectoral output are produced by the Bureau of Labor Statistics. Quarterly manufacturing output indexes from the Federal Reserve Board are adjusted to these annual output measures by the BLS. Compensation data are developed from data of the Bureau of Economic Analysis and the Bureau of Labor Statistics. Hours data are developed from data of the Bureau of Labor Statistics.

The productivity and associated cost measures in tables 39–42 describe the relation-

ship between output in real terms and the labor and capital inputs involved in its production. They show the changes from period to period in the amount of goods and services produced per unit of input.

Although these measures relate output to hours and capital services, they do not measure the contributions of labor, capital, or any other specific factor of production. Rather, they reflect the joint effect of many influences, including changes in technology; shifts in the composition of the labor force; capital investment; level of output; changes in the utilization of capacity, energy, material, and research and development; the organization of production; managerial skill; and characteristics and efforts of the work force.

FOR ADDITIONAL INFORMATION on this productivity series, contact the Division of Productivity Research: (202) 691–5606.

Industry productivity measures

Description of the series

The BLS industry productivity data supplement the measures for the business economy and major sectors with annual measures of labor productivity for selected industries at the three- and four-digit levels of the Standard Industrial Classification system. The industry measures differ in methodology and data sources from the productivity measures for the major sectors because the industry measures are developed independently of the National Income and Product Accounts framework used for the major sector measures.

Definitions

Output per hour is derived by dividing an index of industry output by an index of labor input. For most industries, **output** indexes are derived from data on the value of industry output adjusted for price change. For the remaining industries, output indexes are derived from data on the physical quantity of production.

The **labor input** series consist of the hours of all employees (production and nonproduction workers), the hours of all persons (paid employees, partners, proprietors, and unpaid family workers), or the number of employees, depending upon the industry.

Notes on the data

The industry measures are compiled from data produced by the Bureau of Labor Statistics, the Departments of Commerce, Interior, and Agriculture, the Federal Reserve Board, regulatory agencies, trade associations, and other sources.

For most industries, the productivity indexes refer to the output per hour of all employees. For some transportation industries, only indexes of output per employee are prepared. For some trade and service industries, indexes of output per hour of all persons (including self-employed) are constructed.

FOR ADDITIONAL INFORMATION on this series, contact the Division of Industry Productivity Studies: (202) 691–5618.

International Comparisons

(Tables 43–45)

Labor force and unemployment

Description of the series

Tables 43 and 44 present comparative measures of the labor force, employment, and unemployment—approximating U.S. concepts—for the United States, Canada, Australia, Japan, and several European countries. The unemployment statistics (and, to a lesser extent, employment statistics) published by other industrial countries are not, in most cases, comparable to U.S. unemployment statistics. Therefore, the Bureau adjusts the figures for selected countries, where necessary, for all known major definitional differences. Although precise comparability may not be achieved, these adjusted figures provide a better basis for international comparisons than the figures regularly published by each country.

Definitions

For the principal U.S. definitions of the **labor force**, **employment**, and **unemployment**, see the Notes section on Employment and Unemployment Data: Household survey data.

Notes on the data

The adjusted statistics have been adapted to the age at which compulsory schooling ends in each country, rather than to the U.S. standard of 16 years of age and older. Therefore, the adjusted statistics relate to the population aged 16 and older in France, Sweden, and the United Kingdom; 15 and older in Canada, Australia, Japan, Germany, Italy from 1993 onward, and the Netherlands; and 14 and older in Italy prior to 1993. The institutional population is included in the denominator of the labor force participation rates and employment-population ratios for Japan and Germany; it is excluded for the United States and the other countries.

In the U.S. labor force survey, persons on layoff who are awaiting recall to their jobs are classified as unemployed. European and Japanese layoff practices are quite different in nature from those in the United States; therefore, strict application of the U.S. definition has not been made on this point. For further information, see *Monthly Labor Review*, December 1981, pp. 8–11.

The figures for one or more recent years for France, Germany, Italy, the Netherlands, and the United Kingdom are calculated using adjustment factors based on labor force surveys for earlier years and are considered preliminary. The recent-year measures for these countries, therefore, are subject to revision whenever data from more current labor force surveys become available.

There are breaks in the data series for the United States (1990, 1994, 1997, 1998), France (1992), Italy (1991, 1993), the Netherlands (1988), and Sweden (1987).

For the United States, the break in series reflects a major redesign of the labor force survey questionnaire and collection methodology introduced in January 1994. Revised population estimates based on the 1990 census, adjusted for the estimated undercount, also were incorporated. In 1996, previously published data for the 1990–93 period were revised to reflect the 1990 census-based population controls, adjusted for the undercount. In 1997, revised population controls were introduced into the household survey. Therefore, the data are not strictly conparable with prior years. In 1998, new composite estimation procedures and minor revisions in population controls were introduced into the household survey. Therefore, the data are not strictly comparable with data for 1997 and earlier years. See the Notes section on Employment and Unemployment Data of this *Review*.

For France, the 1992 break reflects the substitution of standardized European Union Statistical Office (EUROSTAT) unemployment statistics for the unemployment data estimated according to the International Labor Office (ILO) definition and published in the Organization for Economic Cooperation and Development (OECD) annual yearbook and quarterly update. This change was made because the EUROSTAT data are more up-to-date than the OECD figures. Also, since 1992, the EUROSTAT definitions are closer to the U.S. definitions than they were in prior years. The impact of this revision was to lower the unemployment rate by 0.1 percentage point in 1992 and 1993, by 0.4 percentage point in 1994, and 0.5 percentage point in 1995.

For Italy, the 1991 break reflects a revision in the method of weighting sample data. The impact was to increase the unemployment rate by approximately 0.3 percentage point, from 6.6 to 6.9 percent in 1991.

In October 1992, the survey methodol-

ogy was revised and the definition of unemployment was changed to include only those who were actively looking for a job within the 30 days preceding the survey and who were available for work. In addition, the lower age limit for the labor force was raised from 14 to 15 years. (Prior to these changes, BLS adjusted Italy's published unemployment rate downward by excluding from the unemployed those persons who had not actively sought work in the past 30 days.) The break in the series also reflects the incorporation of the 1991 population census results. The impact of these changes was to raise Italy's adjusted unemployment rate by approximately 1.2 percentage points, from 8.3 to 9.5 percent in fourth-quarter 1992. These changes did not affect employment significantly, except in 1993. Estimates by the Italian Statistical Office indicate that employment declined by about 3 percent in 1993, rather than the nearly 4 percent indicated by the data shown in table 44. This difference is attributable mainly to the incorporation of the 1991 population benchmarks in the 1993 data. Data for earlier years have not been adjusted to incorporate the 1991 census results.

For the Netherlands, a new survey questionnaire was introduced in 1992 that allowed for a closer application of ILO guidelines. EUROSTAT has revised the Dutch series back to 1988 based on the 1992 changes. The 1988 revised unemployment rate is 7.6 percent; the previous estimate for the same year was 9.3 percent.

There have been two breaks in series in the Swedish labor force survey, in 1987 and 1993. Adjustments have been made for the 1993 break back to 1987. In 1987, a new questionnaire was introduced. Questions regarding current availability were added and the period of active workseeking was reduced from 60 days to 4 weeks. These changes lowered Sweden's 1987 unemployment rate by 0.4 percentage point, from 2.3 to 1.9 percent. In 1993, the measurement period for the labor force survey was changed to represent all 52 weeks of the year rather than one week each month and a new adjustment for population totals was introduced. The impact was to raise the unemployment rate by approximately 0.5 percentage point, from 7.6 to 8.1 percent. Statistics Sweden revised its labor force survey data for 1987–92 to take into account the break in 1993. The adjustment raised the Swedish unemployment rate by 0.2 percentage point in 1987 and gradually rose to 0.5 percentage point in 1992.

Beginning with 1987, BLS has adjusted the Swedish data to classify students who also sought work as unemployed. The impact of this change was to increase the adjusted unemployment rate by 0.1 percentage point in 1987 and by 1.8 percentage points in 1994, when unemployment was higher. In 1998, the adjusted unemployment rate had risen from 6.5 to 8.4 percent due to the adjustment to include students.

The net effect of the 1987 and 1993 changes and the BLS adjustment for students seeking work lowered Sweden's 1987 unemployment rate from 2.3 to 2.2 percent.

FOR ADDITIONAL INFORMATION on this series, contact the Division of Foreign Labor Statistics: (202) 691–5654.

Manufacturing productivity and labor costs

Description of the series

Table 45 presents comparative indexes of manufacturing labor productivity (output per hour), output, total hours, compensation per hour, and unit labor costs for the United States, Canada, Japan, and nine European countries. These measures are trend comparisons—that is, series that measure changes over time—rather than level comparisons. There are greater technical problems in comparing the levels of manufacturing output among countries.

BLS constructs the comparative indexes from three basic aggregate measures—output, total labor hours, and total compensation. The hours and compensation measures refer to all employed persons (wage and salary earners plus self-employed persons and unpaid family workers) in the United States, Canada, Japan, France, Germany, Norway, and Sweden, and to all employees (wage and salary earners) in the other countries.

Definitions

Output, in general, refers to value added in manufacturing from the national accounts of each country. However, the output series for Japan prior to 1970 is an index of industrial production, and the national accounts measures for the United Kingdom are essentially identical to their indexes of industrial production.

The 1977–97 output data for the United States are the gross product originating (value added) measures prepared by the Bureau of Economic Analysis of the U.S. Department of Commerce. Comparable manufacturing output data currently are not available prior to 1977.

U.S. gross product originating is a chain-type annual-weighted series. (For more information on the U.S. measure, see Robert E. Yuskavage, "Improved Estimates of Gross Product by Industry, 1959–94," *Survey of Current Business*, August 1996, pp. 133–55.) The Japanese value added series is based upon one set of fixed price weights for the years 1970 through 1997. Output series for the other foreign economies also employ fixed price weights, but the weights are updated periodically (for example, every 5 or 10 years).

To preserve the comparability of the U.S. measures with those for other economies, BLS uses gross product originating in manufacturing for the United States for these comparative measures. The gross product originating series differs from the manufacturing output series that BLS publishes in its news releases on quarterly measures of U.S. productivity and costs (and that underlies the measures that appear in tables 39 and 41 in this section). The quarterly measures are on a "sectoral output" basis, rather than a value-added basis. Sectoral output is gross output less intrasector transactions.

Total labor hours refers to hours worked in all countries. The measures are developed from statistics of manufacturing employment and average hours. The series used for France (from 1970 forward), Norway, and Sweden are official series published with the national accounts. Where official total hours series are not available, the measures are developed by BLS using employment figures published with the national accounts, or other comprehensive employment series, and estimates of annual hours worked. For Germany, BLS uses estimates of average hours worked developed by a research institute connected to the Ministry of Labor for use with the national accounts employment figures. For the other countries, BLS constructs its own estimates of average hours.

Denmark has not published estimates of average hours for 1994–97; therefore, the BLS measure of labor input for Denmark ends in 1993.

Total compensation (labor cost) includes all payments in cash or in-kind made directly to employees plus employer expenditures for legally required insurance programs and contractual and private benefit plans. The measures are from the national accounts of each country, except those for Belgium, which are developed by BLS using statistics on employment, average hours, and hourly compensation. For Canada, France, and Sweden, compensation is increased to account for other significant taxes on payroll or employment. For the United Kingdom, compensation is reduced between 1967 and 1991 to account for employment-related subsidies. Self-employed workers are included in the all-employed-persons measures by assuming that their hourly compensation is equal to the average for wage and salary employees.

Notes on the data

In general, the measures relate to total manufacturing as defined by the International Standard Industrial Classification. However, the measures for France (for all years) and Italy

(beginning 1970) refer to mining and manufacturing less energy-related products, and the measures for Denmark include mining and exclude manufacturing handicrafts from 1960 to 1966.

The measures for recent years may be based on current indicators of manufacturing output (such as industrial production indexes), employment, average hours, and hourly compensation until national accounts and other statistics used for the long-term measures become available.

FOR ADDITIONAL INFORMATION on this series, contact the Division of Foreign Labor Statistics: (202) 691–5654.

Occupational Injury and Illness Data

(Tables 46–47)

Survey of Occupational Injuries and Illnesses

Description of the series

The Survey of Occupational Injuries and Illnesses collects data from employers about their workers' job-related nonfatal injuries and illnesses. The information that employers provide is based on records that they maintain under the Occupational Safety and Health Act of 1970. Self-employed individuals, farms with fewer than 11 employees, employers regulated by other Federal safety and health laws, and Federal, State, and local government agencies are excluded from the survey.

The survey is a Federal-State cooperative program with an independent sample selected for each participating State. A stratified random sample with a Neyman allocation is selected to represent all private industries in the State. The survey is stratified by Standard Industrial Classification and size of employment.

Definitions

Under the Occupational Safety and Health Act, employers maintain records of nonfatal work-related injuries and illnesses that involve one or more of the following: loss of consciousness, restriction of work or motion, transfer to another job, or medical treatment other than first aid.

Occupational injury is any injury such as a cut, fracture, sprain, or amputation that results from a work-related event or a single, instantaneous exposure in the work environment.

Occupational illness is an abnormal condition or disorder, other than one resulting from an occupational injury, caused by exposure to factors associated with employment. It includes acute and chronic illnesses or disease which may be caused by inhalation, absorption, ingestion, or direct contact.

Lost workday injuries and illnesses are cases that involve days away from work, or days of restricted work activity, or both.

Lost workdays include the number of workdays (consecutive or not) on which the employee was either away from work or at work in some restricted capacity, or both, because of an occupational injury or illness. BLS measures of the number and incidence rate of lost workdays were discontinued beginning with the 1993 survey. The number of days away from work or days of restricted work activity does not include the day of injury or onset of illness or any days on which the employee would not have worked, such as a Federal holiday, even though able to work.

Incidence rates are computed as the number of injuries and/or illnesses or lost work days per 100 full-time workers.

Notes on the data

The definitions of occupational injuries and illnesses are from *Recordkeeping Guidelines for Occupational Injuries and Illnesses* (U.S. Department of Labor, Bureau of Labor Statistics, September 1986).

Estimates are made for industries and employment size classes for total recordable cases, lost workday cases, days away from work cases, and nonfatal cases without lost workdays. These data also are shown separately for injuries. Illness data are available for seven categories: occupational skin diseases or disorders, dust diseases of the lungs, respiratory conditions due to toxic agents, poisoning (systemic effects of toxic agents), disorders due to physical agents (other than toxic materials), disorders associated with repeated trauma, and all other occupational illnesses.

The survey continues to measure the number of new work-related illness cases which are recognized, diagnosed, and reported during the year. Some conditions, for example, long-term latent illnesses caused by exposure to carcinogens, often are difficult to relate to the workplace and are not adequately recognized and reported. These long-term latent illnesses are believed to be understated in the survey's illness measure. In contrast, the overwhelming majority of the reported new illnesses are those which are easier to directly relate to workplace activity (for example, contact dermatitis and carpal tunnel syndrome).

Most of the estimates are in the form of incidence rates, defined as the number of injuries and illnesses per 100 equivalent full-time workers. For this purpose, 200,000 employee hours represent 100 employee years (2,000 hours per employee). Full detail on the available measures is presented in the annual bulletin, *Occupational Injuries and Illnesses: Counts, Rates, and Characteristics.*

Comparable data for more than 40 States and territories are available from the BLS Office of Safety, Health and Working Conditions. Many of these States publish data on State and local government employees in addition to private industry data.

Mining and railroad data are furnished to BLS by the Mine Safety and Health Administration and the Federal Railroad Administration. Data from these organizations are included in both the national and State data published annually.

With the 1992 survey, BLS began publishing details on serious, nonfatal incidents resulting in days away from work. Included are some major characteristics of the injured and ill workers, such as occupation, age, gender, race, and length of service, as well as the circumstances of their injuries and illnesses (nature of the disabling condition, part of body affected, event and exposure, and the source directly producing the condition). In general, these data are available nationwide for detailed industries and for individual States at more aggregated industry levels.

FOR ADDITIONAL INFORMATION on occupational injuries and illnesses, contact the Office of Occupational Safety, Health and Working Conditions at (202) 691–6180, or access the Internet at:

http://www.bls.gov/oshhome.htm

Census of Fatal Occupational Injuries

The Census of Fatal Occupational Injuries compiles a complete roster of fatal job-related injuries, including detailed data about the fatally injured workers and the fatal events. The program collects and cross checks fatality information from multiple sources, including death certificates, State and Federal workers' compensation reports, Occupational Safety and Health Administration and Mine Safety and Health Administration records, medical examiner and autopsy reports, media accounts, State motor vehicle fatality records, and follow-up questionnaires to employers.

In addition to private wage and salary workers, the self-employed, family members, and Federal, State, and local government workers are covered by the program. To be included in the fatality census, the decedent must have been employed (that is working for pay, compensation, or profit) at the time of the event, engaged in a legal work activity, or present at the site of the incident as a requirement of his or her job.

Definition

A fatal work injury is any intentional or unintentional wound or damage to the body resulting in death from acute exposure to energy, such as heat or electricity, or kinetic energy from a crash, or from the absence of such essentials as heat or oxygen caused by a specific event or incident or series of events within a single workday or shift. Fatalities that occur during a person's commute to or from work are excluded from the census, as well as work-related illnesses, which can be difficult to identify due to long latency periods.

Notes on the data

Twenty-eight data elements are collected, coded, and tabulated in the fatality program, including information about the fatally injured worker, the fatal incident, and the machinery or equipment involved. Summary worker demographic data and event characteristics are included in a national news release that is available about 8 months after the end of the reference year. The Census of Fatal Occupational Injuries was initiated in 1992 as a joint Federal-State effort. Most States issue summary information at the time of the national news release.

FOR ADDITIONAL INFORMATION on the Census of Fatal Occupational Injuries contact the BLS Office of Safety, Health, and Working Conditions at (202) 691–6175, or the Internet at:

http://www.bls.gov/oshhome.htm

Bureau of Labor Statistics Internet

The Bureau of Labor Statistics World Wide Web site on the Internet contains a range of data on consumer and producer prices, employment and unemployment, occupational compensation, employee benefits, workplace injuries and illnesses, and productivity. The homepage can be accessed using any Web browser:

http://stats.bls.gov

Also, some data can be accessed through anonymous FTP or Gopher at

stats.bls.gov

1. Labor market indicators

Selected indicators	1998	1999	1998			1999				2000	
			II	III	IV	I	II	III	IV	I	II
Employment data											
Employment status of the civilian noninstitutionalized popu'ation (household survey):[1]											
Labor force participation rate	67.1	67.1	67.0	67.0	67.1	67.2	67.1	67.0	67.0	67.5	67.3
Employment-population ratio	64.1	64.3	64.1	64.0	64.1	64.3	64.2	64.2	64.3	64.7	64.6
Unemployment rate	4.5	4.2	4.4	4.5	4.4	4.3	4.3	4.2	4.1	4.1	4.0
Men	4.4	4.1	4.3	4.5	4.3	4.2	4.2	4.1	4.0	4.0	3.9
16 to 24 years	11.1	10.3	10.7	11.5	10.6	10.4	10.4	10.0	10.4	9.7	9.7
25 years and over	3.2	3.0	3.1	3.2	3.1	3.0	3.0	3.0	2.9	2.9	2.8
Women	4.6	4.3	4.6	4.5	4.6	4.4	4.4	4.4	4.2	4.2	4.1
16 to 24 years	9.8	9.5	9.7	9.9	9.4	9.8	9.2	9.5	9.4	9.6	9.0
25 years and over	3.6	3.3	3.6	3.5	3.6	3.4	3.4	3.3	3.1	3.2	3.2
Employment, nonfarm (payroll data), in thousands:[1]											
Total	125,865	128,786	125,486	126,180	126,967	127,800	128,430	129,073	129,783	130,626	131,552
Private sector	106,042	108,616	105,726	106,321	107,016	107,741	108,319	108,874	109,507	110,195	110,725
Goods-producing	25,414	25,482	25,427	25,408	25,469	25,488	25,454	25,459	25,524	25,680	25,703
Manufacturing	18,805	18,543	18,871	18,765	18,716	18,632	18,543	18,516	18,482	18,481	18,488
Service-producing	100,451	103,304	100,059	100,772	101,498	102,312	102,976	103,614	104,259	104,946	105,849
Average hours:											
Private sector	34.6	34.5	34.6	34.6	34.6	34.5	34.5	34.5	34.5	34.5	34.5
Manufacturing	41.7	41.7	41.7	41.7	41.7	41.6	41.7	41.8	41.7	41.7	41.7
Overtime	4.6	4.6	4.6	4.6	4.5	4.5	4.6	4.6	4.7	4.6	4.7
Employment Cost Index[2]											
Percent change in the ECI, compensation:											
All workers (excluding farm, household and Federal workers)	3.4	3.4	.8	1.2	.6	.4	1.0	1.1	.9	1.3	1.0
Private industry workers	3.5	3.4	.9	1.1	.6	.4	1.1	.9	.9	1.5	1.2
Goods-producing[3]	2.8	3.4	.8	.7	.5	.8	.7	.9	1.0	1.6	1.2
Service-producing[3]	3.8	3.4	.8	1.3	.6	.3	1.3	.9	.8	1.4	1.2
State and local government workers	3.0	3.4	.3	1.5	.6	.5	.4	1.5	1.0	.6	.3
Workers by bargaining status (private industry):											
Union	3.0	2.7	1.0	1.1	.5	.4	.7	.9	.7	1.3	1.0
Nonunion	3.5	3.6	.8	1.1	.6	.5	1.2	.9	1.0	1.5	1.2

[1] Quarterly data seasonally adjusted.

[2] Annual changes are December-to-December changes. Quarterly changes are calculated using the last month of each quarter.

[3] Goods-producing industries include mining, construction, and manufacturing. Service-producing industries include all other private sector industries.

2. Annual and quarterly percent changes in compensation, prices, and productivity

Selected measures	1998	1999	1998			1999				2000	
			II	III	IV	I	II	III	IV	I	II
Compensation data[1,2]											
Employment Cost Index—compensation (wages, salaries, benefits):											
Civilian nonfarm	3.4	3.4	0.8	1.2	0.6	0.4	1.0	1.1	0.9	1.3	1.0
Private nonfarm	3.5	3.4	.9	1.1	.6	.4	1.1	.9	.9	1.5	1.2
Employment Cost Index—wages and salaries:											
Civilian nonfarm	3.7	3.5	.7	1.3	.7	.5	1.0	1.1	.8	1.1	1.0
Private nonfarm	3.9	3.5	.9	1.3	.6	.5	1.2	.9	.9	1.2	1.0
Price data[1]											
Consumer Price Index (All Urban Consumers): All Items	1.6	2.7	.5	.4	.2	.7	.7	1.0	.2	1.7	.7
Producer Price Index:											
Finished goods	.0	2.9	.5	–.1	.4	.0	1.2	1.5	.1	1.4	1.2
Finished consumer goods	.0	3.8	.8	.0	.2	.0	1.8	2.2	–.2	1.8	1.5
Capital equipment	.0	.3	–.5	–.4	.9	–.1	–.4	–.4	1.2	.1	.0
Intermediate materials, supplies, and components	–3.3	3.7	.2	–.5	–1.6	–.2	1.9	1.9	.1	1.9	1.5
Crude materials	–16.7	15.3	–1.8	–5.6	–2.5	–.1	9.4	10.2	–3.5	9.1	7.8
Productivity data[3]											
Output per hour of all persons:											
Business sector	2.7	3.1	1.1	2.1	3.9	3.3	.9	4.9	7.7	1.6	6.5
Nonfarm business sector	2.6	2.9	1.6	1.8	3.6	2.6	.6	5.2	8.0	1.9	5.7
Nonfinancial corporations[4]	3.6	4.3	4.0	5.2	3.4	4.4	3.8	5.1	6.1	2.9	5.0

[1] Annual changes are December-to-December changes. Quarterly changes are calculated using the last month of each quarter. Compensation and price data are not seasonally adjusted, and the price data are not compounded.

[2] Excludes Federal and private household workers.

[3] Annual rates of change are computed by comparing annual averages. Quarterly percent changes reflect annual rates of change in quarterly indexes. The data are seasonally adjusted.

[4] Output per hour of all employees.

3. Alternative measures of wage and compensation changes

Components	Quarterly average						Four quarters ending—					
	1999				2000		1999				2000	
	I	II	III	IV	I	II	I	II	III	IV	I	II
Average hourly compensation:[1]												
All persons, business sector	5.2	5.0	5.3	3.8	3.5	6.4	5.1	5.0	5.1	4.8	4.4	4.7
All persons, nonfarm business sector	4.5	5.0	5.5	4.2	3.9	5.3	4.9	4.8	4.8	4.8	4.6	4.7
Employment Cost Index—compensation:												
Civilian nonfarm[2]	.4	1.0	1.1	.9	1.3	1.0	3.0	3.2	3.1	3.4	4.3	4.4
Private nonfarm	.4	1.1	.9	.9	1.5	1.2	3.0	3.3	3.1	3.4	4.6	4.6
Union	.4	.7	.9	.7	1.3	1.0	3.0	2.7	2.5	2.7	3.6	3.9
Nonunion	.5	1.2	.9	1.0	1.5	1.2	3.0	3.4	3.2	3.6	4.7	4.6
State and local governments	.5	.4	1.5	1.0	.6	.3	2.9	3.0	2.9	3.4	3.6	3.5
Employment Cost Index—wages and salaries:												
Civilian nonfarm[2]	.5	1.0	1.1	.8	1.1	1.0	3.3	3.6	3.3	3.5	4.0	4.0
Private nonfarm	.5	1.2	.9	.9	1.2	1.0	3.3	3.6	3.2	3.5	4.2	4.1
Union	.4	.8	.7	.6	.5	.9	3.1	3.1	2.5	2.6	2.7	2.8
Nonunion	.5	1.2	.9	.9	1.3	1.1	3.3	3.7	3.3	3.6	4.4	4.3
State and local governments	.4	.4	1.9	.9	.6	.3	2.9	3.1	3.3	3.6	3.8	3.7

[1] Seasonally adjusted. "Quarterly average" is percent change from a quarter ago, at an annual rate.

[2] Excludes Federal and household workers.

4. Employment status of the population, by sex, age, race, and Hispanic origin, monthly data seasonally adjusted

[Numbers in thousands]

Employment status	Annual average		1999				2000								
	1998	1999	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
TOTAL															
Civilian noninstitutional population[1]	205,220	207,753	208,265	208,483	208,666	208,832	208,782	208,907	209,053	209,216	209,371	209,543	209,727	209,935	210,161
Civilian labor force	137,673	139,368	139,475	139,697	139,834	140,108	140,910	141,165	140,867	141,230	140,489	140,762	140,399	140,742	1,406,39
Participation rate	67.1	67.1	67.0	67.0	67.0	67.1	67.5	67.6	67.4	67.5	67.1	67.2	66.9	67.0	66.9
Employed	131,463	133,488	133,650	133,940	134,098	134,420	135,221	135,362	135,159	135,706	134,715	135,179	134,749	134,912	1,351,61
Employment-population ratio[2]	64.1	64.3	64.2	64.2	64.3	64.4	64.8	64.8	64.7	64.9	64.3	64.5	64.2	64.3	64.3
Unemployed	6,210	5,880	5,825	5,757	5,736	5,688	5,689	5,804	5,708	5,524	5,774	5,583	5,650	5,829	5,477
Unemployment rate	4.5	4.2	4.2	4.1	4.1	4.1	4.0	4.1	4.1	3.9	4.1	4.0	4.0	4.1	3.9
Not in the labor force	67,547	68,385	68,790	68,786	68,832	68,724	67,872	67,742	68,187	67,986	68,882	68,781	69,329	69,193	69,522
Men, 20 years and over															
Civilian noninstitutional population[1]	90,790	91,555	91,793	91,896	91,986	92,052	92,057	92,092	92,145	92,303	92,408	92,546	92,642	92,754	92,863
Civilian labor force	69,715	70,194	70,328	70,339	70,388	70,529	70,917	71,120	70,822	70,761	70,603	70,714	70,702	71,067	71,002
Participation rate	76.8	76.7	76.6	76.5	76.5	76.6	77.0	77.2	76.9	76.7	76.4	76.4	76.3	76.6	76.5
Employed	67,135	67,761	67,943	67,898	68,037	68,197	68,585	68,691	68,480	68,481	68,230	68,430	68,440	68,757	68,699
Employment-population ratio[2]	73.9	74.0	74.0	73.9	74.0	74.1	74.5	74.6	74.3	74.2	73.8	73.9	73.9	74.1	74.0
Agriculture	2,350	2,244	2,189	2,206	2,262	2,227	2,303	2,309	2,232	2,213	2,217	2,269	2,296	2,288	2,350
Nonagricultural industries	64,785	65,517	65,754	65,692	65,775	65,970	66,282	66,382	66,249	66,269	66,013	66,161	66,144	66,469	66,349
Unemployed	2,580	2,433	2,385	2,441	2,351	2,332	2,332	2,429	2,342	2,280	2,373	2,284	2,263	2,309	2,309
Unemployment rate	3.7	3.5	3.4	3.5	3.3	3.3	3.3	3.4	3.3	3.2	3.4	3.2	3.2	3.2	3.2
Women, 20 years and over															
Civilian noninstitutional population[1]	98,786	100,158	100,385	100,458	100,573	100,666	100,579	100,666	100,713	100,809	100,929	101,007	101,111	101,209	101,321
Civilian labor force	59,702	60,840	60,860	60,955	61,052	61,154	61,576	61,575	61,671	61,920	61,614	61,596	61,508	61,260	61,386
Participation rate	60.4	60.7	60.6	60.7	60.7	60.7	61.2	61.2	61.2	61.4	61.0	61.0	60.8	60.5	60.6
Employed	57,278	58,555	58,630	58,800	58,838	58,958	59,280	59,398	59,422	59,757	59,248	59,278	59,222	58,949	59,268
Employment-population ratio[2]	58.0	58.5	58.4	58.5	58.5	58.6	58.9	59.0	59.0	59.3	58.7	58.7	58.6	58.2	58.5
Agriculture	768	803	778	800	768	791	826	871	894	899	864	834	792	824	744
Nonagricultural industries	56,510	57,752	57,852	58,000	58,070	58,167	58,454	58,526	58,528	58,858	58,383	58,444	58,430	58,125	58,524
Unemployed	2,424	2,285	2,230	2,155	2,214	2,196	2,297	2,178	2,249	2,163	2,367	2,318	2,286	2,311	2,118
Unemployment rate	4.1	3.8	3.7	3.5	3.6	3.6	3.7	3.5	3.6	3.5	3.8	3.8	3.7	3.8	3.5
Both sexes, 16 to 19 years															
Civilian noninstitutional population[1]	15,644	16,040	16,086	16,129	16,107	16,114	16,147	16,149	16,196	16,104	16,034	15,991	15,974	15,972	15,977
Civilian labor force	8,256	8,333	8,287	8,403	8,394	8,425	8,416	8,470	8,374	8,549	8,271	8,452	8,189	8,415	8,251
Participation rate	52.8	52.0	51.5	52.1	52.1	52.3	52.1	52.4	51.7	53.1	51.6	52.9	51.3	52.7	51.6
Employed	7,051	7,172	7,077	7,242	7,223	7,265	7,356	7,273	7,257	7,467	7,237	7,471	7,087	7,206	7,195
Employment-population ratio[2]	45.1	44.7	44.0	44.9	44.8	45.1	45.6	45.0	44.8	46.4	45.1	46.7	44.4	45.1	45.0
Agriculture	261	234	212	232	280	261	242	228	233	243	217	218	211	232	247
Nonagricultural industries	6,790	6,938	6,865	7,010	6,943	7,004	7,114	7,046	7,024	7,224	7,020	7,253	6,876	6,974	6,948
Unemployed	1,205	1,162	1,210	1,161	1,171	1,160	1,060	1,197	1,117	1,082	1,034	981	1,101	1,209	1,056
Unemployment rate	14.6	13.9	14.6	13.8	14.0	13.8	12.6	14.1	13.3	12.7	12.5	11.6	13.4	14.4	12.8
White															
Civilian noninstitutional population[1]	171,478	173,085	173,432	173,585	173,709	173,821	173,812	173,886	173,983	174,092	174,197	174,316	174,443	174,587	174,745
Civilian labor force	115,415	116,509	116,495	116,654	116,703	117,008	117,716	117,821	117,832	117,988	117,097	117,451	117,258	117,551	117,535
Participation rate	67.3	67.3	67.2	67.2	67.2	67.3	67.7	67.8	67.7	67.8	67.2	67.4	67.2	67.3	67.3
Employed	110,931	112,235	112,303	112,548	112,611	112,951	113,704	113,634	113,630	113,915	112,988	113,484	113,156	113,352	113,450
Employment-population ratio[2]	64.7	64.8	64.8	64.8	64.8	65.0	65.4	65.3	65.3	65.4	64.9	65.1	64.9	64.9	64.9
Unemployed	4,484	4,273	4,192	4,106	4,092	4,057	4,011	4,187	4,202	4,073	4,108	3,967	4,103	4,199	4,085
Unemployment rate	3.9	3.7	3.6	3.5	3.5	3.5	3.4	3.6	3.6	3.5	3.5	3.4	3.5	3.6	3.5
Black															
Civilian noninstitutional population[1]	24,373	24,855	24,946	24,985	25,019	25,051	25,047	25,076	25,105	25,135	25,161	25,191	25,221	25,258	25,299
Civilian labor force	15,982	16,365	16,474	16,489	16,508	16,513	16,622	16,785	16,572	16,636	16,596	16,557	16,456	16,512	26,403
Participation rate	65.6	65.8	66.0	66.0	66.0	65.9	66.4	66.9	66.0	66.2	66.0	65.8	65.2	65.4	64.8
Employed	14,556	15,056	15,114	15,124	15,187	15,204	15,254	15,471	15,356	15,444	15,261	15,275	15,190	15,190	15,246
Employment-population ratio[2]	59.7	60.6	60.6	60.5	60.7	60.7	60.9	61.7	61.2	61.4	60.7	60.6	60.2	60.1	60.3
Unemployed	1,426	1,309	1,360	1,365	1,321	1,309	1,368	1,314	1,216	1,191	1,335	1,302	1,266	1,322	1,156
Unemployment rate	8.9	8.0	8.3	8.3	8.0	7.9	8.2	7.8	7.3	7.2	8.0	7.9	7.7	8.0	7.0

See footnotes at end of table.

4. Continued—Employment status of the population, by sex, age, race, and Hispanic origin, monthly data seasonally adjusted

[Numbers in thousands]

Employment status	Annual average		1999				2000								
	1998	1999	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Hispanic origin															
Civilian noninstitutional population[1]	21,070	21,650	21,820	21,881	21,947	22,008	22,047	22,108	22,166	22,231	22,292	22,355	22,422	22,488	22,555
Civilian labor force	14,317	14,665	14,766	14,809	14,887	14,984	15,251	15,249	15,313	15,355	15,322	15,325	15,188	15,248	15,536
Participation rate	67.9	67.7	67.7	67.7	67.8	68.1	69.2	69.0	69.1	69.1	68.7	68.6	67.7	67.8	68.9
Employed	13,291	13,720	13,795	13,879	13,979	14,095	14,395	14,382	14,355	14,524	14,432	14,461	14,339	14,371	14,371
Employment-population ratio[2]	63.1	63.4	63.2	63.4	63.7	64.0	65.3	65.1	64.8	65.3	64.7	64.7	64.0	63.9	65.0
Unemployed	1,026	945	971	930	908	889	856	868	958	831	890	864	849	876	871
Unemployment rate	7.2	6.4	6.6	6.3	6.1	5.9	5.6	5.7	6.3	5.4	5.8	5.6	5.6	5.7	5.6

[1] The population figures are not seasonally adjusted.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" groups are not presented and Hispanics are included in both the white and black population groups.

5. Selected employment indicators, monthly data seasonally adjusted

[In thousands]

Selected categories	Annual average		1999				2000								
	1998	1999	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Characteristic															
Employed, 16 years and over	131,463	133,488	133,650	133,940	134,098	134,420	135,221	135,362	135,159	135,706	134,715	135,179	134,749	134,912	135
Men	70,693	71,446	71,630	71,623	71,732	71,927	72,358	72,473	72,313	72,307	71,948	72,217	72,063	72,407	72,352
Women	60,771	62,042	62,020	62,317	62,366	62,493	62,863	62,889	62,846	63,399	62,767	62,962	62,686	62,505	62,809
Married men, spouse present	42,923	43,254	43,367	43,206	43,273	43,283	43,951	43,535	43,297	43,272	43,216	43,357	43,284	43,372	43,324
Married women, spouse present	32,872	33,450	33,275	33,521	33,635	33,762	34,166	33,882	33,780	33,877	33,786	33,824	33,618	33,413	33,402
Women who maintain families	7,904	8,229	8,312	8,398	8,526	8,375	8,362	8,220	8,082	8,307	8,301	8,280	8,483	8,519	8,548
Class of worker															
Agriculture:															
Wage and salary workers	2,000	1,944	1,930	1,936	2,049	2,018	2,024	2,025	2,043	2,054	2,006	2,059	2,079	2,056	122,992
Self-employed workers	1,341	1,297	1,198	1,267	1,216	1,211	1,320	1,344	1,292	1,272	1,252	1,175	1,182	1,258	1,288
Unpaid family workers	38	40	40	42	41	36	38	51	42	43	38	50	40	37	39
Nonagricultural industries:															
Wage and salary workers	119,019	121,323	121,583	121,654	121,965	122,426	122,823	123,166	123,169	123,623	122,860	123,002	122,681	122,773	122,992
Government	18,383	18,903	19,080	18,817	18,902	18,959	19,013	19,394	19,598	19,280	19,169	18,777	18,497	18,496	18,979
Private industries	100,637	102,420	102,503	102,837	103,063	103,467	103,810	103,772	103,571	104,343	103,691	104,225	104,184	104,277	104,013
Private households	962	933	1,035	939	944	948	952	1,016	998	1,019	953	957	807	716	812
Other	99,674	101,487	101,468	101,898	102,119	102,519	102,858	102,756	102,573	103,324	102,783	103,268	103,377	103,561	103,201
Self-employed workers	8,962	8,790	8,791	8,833	8,686	8,662	8,802	8,793	8,704	8,750	8,714	8,665	8,609	8,590	8,779
Unpaid family workers	103	95	100	101	108	98	92	74	107	103	82	71	80	116	105
Persons at work part time[1]															
All industries:															
Part time for economic reasons	3,665	3,357	3,283	3,179	3,274	3,320	3,219	3,139	3,124	3,124	3,248	3,117	3,071	3,164	3,189
Slack work or business conditions	2,095	1,968	1,922	1,928	1,930	1,951	1,893	1,807	1,820	1,844	1,962	1,811	1,846	1,997	2,101
Could only find part-time work	1,258	1,079	1,073	993	1,032	1,025	1,012	1,023	953	1,016	978	1,022	900	855	815
Part time for noneconomic reasons	18,530	18,758	18,801	18,799	18,651	18,618	18,889	19,031	18,770	18,474	18,409	18,308	18,558	18,709	18,456
Nonagricultural industries:															
Part time for economic reasons	3,501	3,189	3,112	2,983	3,105	3,157	3,066	2,985	3,003	3,021	3,096	2,967	2,940	3,038	3,021
Slack work or business conditions	1,997	1,861	1,806	1,807	1,815	1,843	1,801	1,705	1,766	1,782	1,840	1,713	1,750	1,924	1,983
Could only find part-time work	1,228	1,056	1,063	964	1,013	1,018	966	1,005	922	989	962	994	881	838	804
Part time for noneconomic reasons	17,954	18,197	18,273	18,249	18,083	18,061	18,347	18,406	18,184	17,943	17,853	17,743	18,041	18,190	17,879

[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial disputes.

6. Selected unemployment indicators, monthly data seasonally adjusted

[Unemployment rates]

Selected categories	Annual average		1999				2000								
	1998	1999	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Characteristic															
Total, 16 years and over	4.5	4.2	4.2	4.1	4.1	4.1	4.0	4.1	4.1	3.9	4.1	4.0	4.0	4.1	3.9
Both sexes, 16 to 19 years	14.6	13.9	14.6	13.8	14.0	13.8	12.6	14.1	13.3	12.7	12.5	11.6	13.4	14.4	14.4
Men, 20 years and over	3.7	3.5	3.4	3.5	3.3	3.3	3.3	3.4	3.3	3.2	3.4	3.2	3.2	3.2	3.2
Women, 20 years and over	4.1	3.8	3.7	3.5	3.6	3.6	3.7	3.5	3.6	3.5	3.8	3.8	3.7	3.8	3.5
White, total	3.9	3.7	3.6	3.5	3.5	3.5	3.4	3.6	3.6	3.5	3.5	3.4	3.5	3.6	3.5
Both sexes, 16 to 19 years	12.6	12.0	12.3	11.8	12.0	12.2	10.8	12.5	11.7	11.6	10.6	9.4	11.5	12.2	11.5
Men, 16 to 19 years	14.1	12.6	12.7	11.9	12.8	13.3	12.4	14.4	11.3	13.0	10.7	11.2	12.6	13.3	12.2
Women, 16 to 19 years	10.9	11.3	11.9	11.7	11.2	10.9	9.1	10.4	12.1	10.0	10.5	7.4	10.3	11.0	10.7
Men, 20 years and over	3.2	3.0	2.9	2.9	2.8	2.8	2.8	2.9	2.9	2.8	2.8	2.8	2.7	2.7	2.9
Women, 20 years and over	3.4	3.3	3.2	3.1	3.1	3.0	3.1	3.1	3.2	3.1	3.3	3.2	3.3	3.3	3.1
Black, total	8.9	8.0	8.3	8.3	8.0	7.9	8.2	7.8	7.3	7.2	8.0	7.9	7.7	8.0	7.0
Both sexes, 16 to 19 years	27.6	27.9	30.8	30.8	28.4	25.3	23.9	24.3	25.1	22.2	23.9	25.4	26.6	27.8	23.9
Men, 16 to 19 years	30.1	30.9	30.3	35.3	31.0	27.5	24.0	22.3	21.3	22.0	27.7	32.0	25.0	33.7	26.7
Women, 16 to 19 years	25.3	25.1	31.4	26.1	25.9	23.0	23.8	26.6	28.9	22.4	20.2	18.2	27.9	22.5	21.5
Men, 20 years and over	7.4	6.7	7.1	7.7	7.0	7.0	7.4	7.1	6.4	6.6	7.2	6.9	6.7	7.4	6.3
Women, 20 years and over	7.9	6.8	6.7	6.1	6.6	6.7	7.2	6.5	6.1	5.8	7.0	6.6	6.4	6.3	5.8
Hispanic origin, total	7.2	6.4	6.6	6.3	6.1	5.9	5.6	5.7	6.3	5.4	5.8	5.6	5.6	5.7	5.6
Married men, spouse present	2.4	2.2	2.2	2.2	2.1	2.2	2.0	2.1	2.0	1.8	1.9	1.9	2.0	2.0	2.1
Married women, spouse present	2.9	2.7	2.6	2.5	2.5	2.5	2.6	2.6	2.7	2.6	2.9	2.6	2.8	2.9	2.8
Women who maintain families	7.2	6.4	6.4	6.0	6.0	6.2	6.2	6.1	6.8	6.3	6.5	6.1	5.6	6.0	5.3
Full-time workers	4.3	4.1	4.0	4.0	3.9	3.9	3.9	3.9	3.8	3.8	3.9	3.8	3.7	4.0	3.8
Part-time workers	5.3	5.0	5.0	4.7	4.9	4.9	4.6	4.9	5.1	4.6	5.3	4.8	5.3	5.0	4.6
Industry															
Nonagricultural wage and salary workers	4.6	4.3	4.3	4.2	4.2	4.1	4.2	4.2	4.3	4.0	4.2	4.0	4.1	4.1	4.0
Mining	3.2	5.7	6.7	5.0	4.6	4.1	2.6	4.0	2.5	2.8	4.2	3.5	5.1	4.6	5.8
Construction	7.5	7.0	6.9	6.7	5.7	6.6	6.4	7.5	6.9	5.2	5.8	5.9	5.9	6.5	6.4
Manufacturing	3.9	3.6	3.9	3.7	3.7	3.6	3.2	3.3	3.9	4.0	3.7	3.4	3.6	3.5	3.6
Durable goods	3.4	3.5	4.0	3.5	3.7	3.6	2.8	3.0	3.0	3.9	3.6	3.5	3.3	3.1	3.1
Nondurable goods	4.7	3.9	3.9	4.0	3.7	3.5	3.9	3.8	5.2	4.1	3.7	3.1	4.0	4.3	4.4
Transportation and public utilities	3.4	3.0	2.8	3.1	3.3	3.0	3.7	3.2	3.1	2.9	3.2	2.7	3.2	3.1	3.3
Wholesale and retail trade	5.5	5.2	5.2	4.9	5.3	5.2	5.1	5.3	5.4	4.9	5.1	5.2	5.0	5.1	4.7
Finance, insurance, and real estate	2.5	2.3	2.3	2.3	2.3	2.1	2.5	2.9	2.4	2.6	2.4	2.3	2.1	2.5	2.0
Services	4.5	4.1	4.1	4.0	3.9	3.8	4.2	3.7	4.0	3.7	4.1	3.8	4.0	3.8	3.6
Government workers	2.3	2.2	2.0	2.1	2.0	2.1	2.1	2.2	1.7	1.7	2.0	2.5	2.1	2.4	2.0
Agricultural wage and salary workers	8.3	8.9	5.7	7.7	8.3	7.1	5.0	6.5	5.6	8.4	7.6	7.3	7.0	8.5	7.8
Educational attainment[1]															
Less than a high school diploma	7.1	6.7	6.8	6.6	6.5	6.0	6.6	6.0	6.9	6.1	7.0	6.4	6.4	6.1	6.1
High school graduates, no college	4.0	3.5	3.5	3.3	3.3	3.5	3.5	3.5	3.4	3.4	3.6	3.4	3.3	3.7	3.3
Some college, less than a bachelor's degree	3.0	2.8	2.7	2.7	2.7	2.5	2.6	2.9	2.7	2.6	2.5	2.9	2.8	2.9	2.6
College graduates	1.8	1.8	1.7	1.7	1.7	1.8	1.8	1.6	1.6	1.5	1.6	1.5	1.7	1.8	1.9

[1] Data refer to persons 25 years and over.

7. Duration of unemployment, monthly data seasonally adjusted

[Numbers in thousands]

Weeks of unemployment	Annual average		1999				2000								
	1998	1999	Sept.	Oct.	Nov,	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept
Less than 5 weeks	2,622	2,568	2,582	2,545	2,601	2,620	2,447	2,603	2,824	2,455	2,531	2,595	2,470	2,594	2,487
5 to 14 weeks	1,950	1,832	1,805	1,811	1,760	1,694	1,754	1,864	1,719	1,868	1,953	1,759	1,812	1,846	1,717
15 weeks and over	1,637	1,480	1,412	1,434	1,401	1,388	1,372	1,277	1,295	1,250	1,337	1,242	1,331	1,384	1,276
15 to 26 weeks	763	755	708	719	725	693	667	673	657	670	677	593	654	679	607
27 weeks and over	875	725	704	715	676	695	705	604	637	580	660	649	677	705	624
Mean duration, in weeks	14.5	13.4	13.0	13.2	13.0	12.9	13.2	12.5	12.8	12.4	12.6	12.4	13.3	13.0	11.9
Median duration, in weeks	6.7	6.4	5.9	6.3	6.2	5.9	5.7	6.1	6.0	6.0	5.8	5.8	6.0	6.2	5.2

8. Unemployed persons by reason for unemployment, monthly data seasonally adjusted

[Numbers in thousands]

Reason for unemployment	Annual average		1999				2000								
	1998	1999	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Job losers[1]	2,822	2,622	2,573	2,518	2,493	2,401	2,477	2,616	2,541	2,306	2,483	2,450	2,417	2,615	2,511
On temporary layoff	866	848	869	802	851	795	739	838	781	703	894	959	856	940	823
Not on temporary layoff	1,957	1,774	1,704	1,716	1,642	1,606	1,739	1,778	1,759	1,602	1,589	1,491	1,561	1,674	1,688
Job leavers	734	783	758	778	821	825	776	759	824	883	774	671	799	782	746
Reentrants	2,132	2,005	1,967	1,958	1,935	2,036	2,043	1,975	1,979	1,961	2,093	2,076	1,961	1,919	1,774
New entrants	520	469	504	511	485	453	393	387	434	408	500	343	402	514	411
Percent of unemployed															
Job losers[1]	45.5	44.6	44.3	43.7	43.5	42.0	43.5	45.6	44.0	41.9	42.4	44.2	43.3	44.8	46.2
On temporary layoff	13.9	14.4	15.0	13.9	14.8	13.9	13.0	14.6	13.5	12.8	15.3	17.3	15.3	16.1	15.1
Not on temporary layoff	31.5	30.2	29.4	29.8	28.6	28.1	30.6	31.0	30.5	29.1	27.2	26.9	28.0	28.7	31.0
Job leavers	11.8	13.3	13.1	13.5	14.3	14.4	13.6	13.2	14.3	15.1	13.2	12.1	14.3	13.4	13.7
Reentrants	34.3	34.1	33.9	34.0	33.7	35.6	35.9	34.4	34.3	35.6	35.8	37.5	35.1	32.9	32.6
New entrants	8.4	8.0	8.7	8.9	8.5	7.9	6.9	6.7	7.5	7.4	8.5	6.2	7.2	8.8	7.5
Percent of civilian labor force															
Job losers[1]	2.1	1.9	1.8	1.8	1.8	1.7	1.8	1.9	1.8	1.6	1.8	1.7	1.7	1.9	1.8
Job leavers	.5	.6	.5	.6	.6	.6	.6	.5	.6	.6	.6	.5	.6	.6	.5
Reentrants	1.5	1.4	1.4	1.4	1.4	1.5	1.4	1.4	1.4	1.4	1.5	1.5	1.4	1.4	1.4
New entrants	.4	.3	.4	.4	.3	.3	.3	.3	.3	.3	.4	.2	.3	.4	.4

[1] Includes persons who completed temporary jobs.

9. Unemployment rates by sex and age, monthly data seasonally adjusted

[Civilian workers]

Sex and age	Annual average		1999				2000								
	1998	1999	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Total, 16 years and over	4.5	4.2	4.2	4.1	4.1	4.1	4.0	4.1	4.1	3.9	4.1	4.0	4.0	4.1	3.9
16 to 24 years	10.4	9.9	10.0	10.0	10.0	9.8	9.3	10.0	9.7	9.3	9.8	9.0	9.2	9.4	8.7
16 to 19 years	14.6	13.9	14.6	13.9	14.0	13.8	12.6	14.1	13.3	12.7	12.5	11.6	13.4	14.4	12.8
16 to 17 years	17.2	16.3	16.1	15.9	16.5	16.5	14.0	15.9	15.3	14.6	16.0	13.1	16.5	17.1	15.7
18 to 19 years	12.8	12.4	13.8	12.4	12.3	12.1	11.4	12.8	12.1	11.4	10.4	10.6	11.5	12.6	11.2
20 to 24 years	7.9	7.5	7.2	7.7	7.7	7.4	7.4	7.5	7.6	7.2	8.2	7.5	6.8	6.4	6.4
25 years and over	3.4	3.1	3.1	3.0	3.0	3.0	3.0	3.0	3.0	2.9	3.0	3.0	3.0	3.1	3.0
25 to 54 years	3.5	3.2	3.2	3.1	3.1	3.0	3.1	3.0	3.0	3.0	3.1	3.1	3.2	3.2	3.0
55 years and over	2.7	2.8	2.6	2.7	2.6	2.7	2.8	3.0	2.7	2.4	2.4	2.3	2.4	2.6	2.8
Men, 16 years and over	4.4	4.1	4.0	4.1	4.0	4.0	3.9	4.1	3.8	3.8	3.9	3.9	3.8	4.0	3.8
16 to 24 years	11.1	10.3	9.9	10.4	10.2	10.6	9.7	10.3	9.2	9.6	10.0	9.5	9.6	10.1	9.3
16 to 19 years	16.2	14.7	14.6	14.2	14.9	15.2	14.0	15.5	12.4	13.6	13.1	14.1	14.0	16.0	13.6
16 to 17 years	19.1	17.0	16.6	15.5	16.9	17.7	14.3	17.3	15.1	15.8	16.9	15.6	17.4	16.9	17.4
18 to 19 years	14.1	13.1	13.2	13.2	13.6	13.5	13.7	13.9	10.5	12.4	10.8	13.3	11.9	15.5	11.0
20 to 24 years	8.1	7.7	7.2	8.2	7.5	7.8	7.2	7.3	7.4	7.3	8.3	6.8	7.1	6.7	6.9
25 years and over	3.2	3.0	3.0	2.9	2.8	2.8	2.8	2.9	2.8	2.7	2.8	2.8	2.8	2.8	2.8
25 to 54 years	3.3	3.0	3.0	3.0	2.9	2.9	2.9	2.9	2.8	2.7	2.8	2.9	2.8	2.9	2.8
55 years and over	2.8	2.8	2.9	2.8	2.6	2.5	2.5	2.8	2.8	2.7	2.6	2.2	2.4	2.7	2.6
Women, 16 years and over	4.6	4.3	4.3	4.2	4.2	4.1	4.2	4.1	4.3	4.0	4.3	4.1	4.3	4.3	4.0
16 to 24 years	9.8	9.5	10.0	9.6	9.8	8.9	8.9	9.6	10.2	8.9	9.5	8.5	8.9	8.6	8.0
16 to 19 years	12.9	13.2	14.7	13.4	13.0	12.2	11.1	12.6	14.4	11.6	11.8	8.9	12.8	12.6	11.9
16 to 17 years	15.1	15.5	15.6	16.3	16.1	15.1	13.7	14.3	15.4	13.3	15.0	10.4	15.5	17.3	13.9
18 to 19 years	11.5	11.6	14.5	11.4	10.8	10.5	8.9	11.6	13.7	10.4	9.9	7.8	11.0	9.4	11.5
20 to 24 years	7.8	7.2	7.2	7.2	7.9	7.0	7.6	7.8	7.7	7.2	8.2	8.2	6.5	6.2	5.7
25 years and over	3.6	3.3	3.2	3.1	3.1	3.2	3.2	3.0	3.2	3.0	3.3	3.2	3.3	3.5	3.2
25 to 54 years	3.8	3.4	3.4	3.2	3.3	3.2	3.3	3.0	3.3	3.2	3.5	3.4	3.5	3.6	3.2
55 years and over	2.6	2.8	2.1	2.5	2.6	2.9	3.1	3.3	2.7	2.0	2.3	2.4	2.3	2.6	3.1

10. Unemployment rates by State, seasonally adjusted

State	Aug. 1999	July 2000[p]	Aug. 2000	State	Aug. 1999	July 2000[p]	Aug. 2000
Alabama	4.9	4.1	4.5	Missouri	3.4	2.4	2.6
Alaska	6.3	5.5	5.8	Montana	5.2	5.1	5.1
Arizona	4.5	3.7	4.0	Nebraska	2.8	2.8	2.7
Arkansas	4.4	4.1	4.1	Nevada	4.7	3.5	3.7
California	5.0	5.1	5.1	New Hampshire	2.6	3.1	2.9
Colorado	2.8	2.7	2.8	New Jersey	4.7	3.7	4.0
Connecticut	3.0	2.4	2.5	New Mexico	5.5	5.4	5.4
Delaware	3.3	3.8	3.9	New York	5.2	4.2	4.5
District of Columbia	5.9	5.0	5.4	North Carolina	3.2	3.2	3.5
Florida	3.7	3.7	3.7	North Dakota	3.3	2.6	2.9
Georgia	4.0	3.3	3.7	Ohio	4.4	4.2	4.2
Hawaii	5.4	4.0	4.3	Oklahoma	3.2	3.0	3.2
Idaho	5.2	4.5	4.5	Oregon	5.8	5.0	5.3
Illinois	4.4	4.3	4.2	Pennsylvania	4.5	4.0	4.0
Indiana	3.0	3.6	3.4	Rhode Island	4.2	4.0	4.5
Iowa	2.5	2.1	2.2	South Carolina	4.5	4.0	4.2
Kansas	2.9	3.4	3.4	South Dakota	2.9	2.3	2.2
Kentucky	4.4	3.9	3.8	Tennessee	4.0	3.6	3.6
Louisiana	4.9	4.5	4.7	Texas	4.6	4.1	4.3
Maine	4.1	3.5	3.2	Utah	3.7	3.0	3.1
Maryland	3.4	3.2	3.5	Vermont	3.0	2.7	2.7
Massachusetts	3.2	2.9	2.6	Virginia	2.8	2.5	2.5
Michigan	3.6	3.6	3.8	Washington	4.7	4.9	5.1
Minnesota	2.9	2.5	2.8	West Virginia	6.6	5.4	5.2
Mississippi	5.0	5.6	4.9	Wisconsin	2.9	3.7	3.5
				Wyoming	4.8	4.0	4.3

[p] = preliminary

11. Employment of workers on nonfarm payrolls by State, seasonally adjusted

[In thousands]

State	Aug. 1999	July 2000	Aug. 2000[p]	State	Aug. 1999	July 2000	Aug. 2000[p]
Alabama	1,930.5	1,947.2	1,950.8	Missouri	2,725.8	2,751.9	2,772.6
Alaska	278.1	282.8	282.9	Montana	382.9	390.3	390.0
Arizona	2,172.8	2,268.1	2,274.2	Nebraska	894.9	890.7	889.9
Arkansas	1,141.3	1,170.6	1,171.5	Nevada	994.4	1,031.0	1,038.1
California	14,033.4	14,436.2	14,450.7	New Hampshire	608.3	610.2	611.5
Colorado	2,148.0	2,203.1	2,202.7	New Jersey	5,870.9	3,920.4	3,918.6
Connecticut	1,676.2	1,696.2	1,696.5	New Mexico	733.0	743.0	747.3
Delaware	413.4	424.8	423.3	New York	8,469.9	8,615.0	8,587.4
District of Columbia	617.0	615.3	625.2	North Carolina	3,906.2	3,934.9	3,950.7
Florida	6,909.7	7,171.0	7,198.5	North Dakota	323.1	324.2	322.6
Georgia	3,916.1	4,003.5	4,013.3	Ohio	5,561.5	5,588.7	5,595.4
Hawaii	538.8	545.0	545.4	Oklahoma	1,463.6	1,492.2	1,493.1
Idaho	542.6	561.0	563.9	Oregon	1,579.8	1,600.3	1,599.1
Illinois	5,968.1	6,018.3	6,013.7	Pennsylvania	5,587.1	5,609.0	5,557.8
Indiana	2,980.6	6,918.3	3,003.2	Rhode Island	466.8	473.3	470.7
Iowa	1,465.3	6,918.3	1,494.0	South Carolina	1,837.7	1,872.9	1,881.5
Kansas	1,325.3	6,918.3	1,351.8	South Dakota	372.7	377.3	378.4
Kentucky	1,799.3	6,918.3	1,841.9	Tennessee	2,687.5	2,724.4	2,728.3
Louisiana	1,898.1	6,918.3	1,911.0	Texas	9,162.9	9,385.9	9,416.8
Maine	586.2	6,918.3	598.1	Utah	1,053.0	1,071.9	1,072.6
Maryland	2,372.6	6,918.3	2,421.1	Vermont	290.9	296.5	296.0
Massachusetts	3,247.8	6,918.3	3,286.3	Virginia	3,415.2	3,465.2	3,471.6
Michigan	4,542.6	6,918.3	4,578.4	Washington	2,649.8	2,263.9	2,705.0
Minnesota	2,617.0	6,918.3	2,660.4	West Virginia	723.5	730.8	728.9
Mississippi	1,161.5	6,918.3	1,146.5	Wisconsin	2,782.7	2,820.2	2,822.7
				Wyoming	231.2	237.9	234.9

[p] = preliminary

NOTE: Some data in this table may differ from data published elsewhere because of the continual updating of the data base.

12. Employment of workers on nonfarm payrolls by industry, monthly data seasonally adjusted

[In thousands]

Industry	Annual average		1999				2000								
	1998	1999	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.[p]	Sept.[p]
TOTAL	125,865	128,786	129,265	129,523	129,788	130,038	130,387	130,482	131,009	131,419	131,590	131,647	#######	131,516	131,768
PRIVATE SECTOR	106,042	108,616	109,042	109,275	109,517	109,730	110,036	110,088	110,462	110,752	110,578	110,845	111,001	111,018	111,306
GOODS-PRODUCING	25,414	25,482	25,460	25,483	25,527	25,561	25,677	25,624	25,738	25,725	25,684	25,700	15,756	25,643	25,606
Mining	590	535	527	529	527	530	530	533	536	539	539	539	538	537	536
Metal mining	49	45	45	45	45	45	45	45	45	45	44	44	43	44	44
Oil and gas extraction	339	293	287	289	288	291	293	296	300	303	305	306	306	304	303
Nonmetallic minerals, except fuels	110	112	112	112	112	111	111	111	111	111	110	110	110	109	108
Construction	6,020	6,404	6,439	6,470	6,516	6,552	6,652	6,618	6,726	6,694	6,666	6,668	6,670	6,675	6,703
General building contractors	1,377	1,450	1,458	1,464	1,470	1,474	1,498	1,491	1,508	1,497	1,497	1,498	1,498	1,504	1,509
Heavy construction, except building	840	869	866	872	876	882	892	885	905	899	888	877	881	883	881
Special trades contractors	3,804	4,084	4,115	4,134	4,170	4,196	4,262	4,242	4,313	4,298	4,281	4,293	4,291	4,288	4,315
Manufacturing	18,805	18,543	18,494	18,484	18,484	18,479	18,495	18,473	18,476	18,492	18,479	18,493	18,548	18,431	18,365
Production workers	12,952	12,739	12,700	12,702	12,702	12,701	12,713	12,697	12,683	12,689	12,682	12,683	12,741	12,629	12,592
Durable goods	11,205	11,103	11,090	11,083	11,085	11,087	11,099	11,088	11,094	11,104	11,106	11,120	11,161	11,086	11,045
Production workers	7,666	7,590	7,580	7,581	7,579	7,579	7,592	7,592	7,580	7,584	7,584	7,593	7,629	7,568	7,543
Lumber and wood products	814	828	830	831	831	831	830	832	830	830	828	827	825	818	814
Furniture and fixtures	533	548	551	553	553	552	553	553	555	557	558	558	564	557	557
Stone, clay, and glass products	562	563	563	562	564	565	568	567	568	567	566	568	571	566	564
Primary metal industries	715	700	697	697	698	698	699	699	701	699	699	699	698	695	692
Fabricated metal products	1,509	1,517	1,518	1,519	1,520	1,521	1,523	1,525	1,528	1,534	1,535	1,540	1,539	1,538	1,532
Industrial machinery and equipment	2,206	2,141	2,133	2,130	2,131	2,132	2,130	2,131	2,124	2,126	2,125	2,130	2,137	2,132	2,123
Computer and office equipment	382	370	370	369	370	370	369	368	366	364	360	360	361	363	361
Electronic and other electrical equipment	1,707	1,670	1,670	1,672	1,670	1,673	1,679	1,684	1,682	1,691	1,693	1,697	1,719	1,719	1,712
Electronic components and accessories	660	636	636	638	638	640	642	645	646	651	654	661	670	675	679
Transportation equipment	1,893	1,884	1,880	1,873	1,870	1,867	1,871	1,855	1,865	1,859	1,863	1,864	1,863	1,818	1,811
Motor vehicles and equipment	995	1,019	1,025	1,022	1,022	1,023	1,027	1,029	1,028	1,026	1,026	1,030	1,029	993	989
Aircraft and parts	525	495	483	478	473	470	469	453	467	461	463	460	460	456	457
Instruments and related products	873	856	852	849	850	849	847	844	844	844	845	844	849	848	846
Miscellaneous manufacturing industries	395	395	396	397	398	399	399	398	397	397	394	393	396	395	394
Nondurable goods	7,600	7,440	7,404	7,401	7,399	7,392	7,396	7,385	7,382	7,388	7,373	7,373	7,387	7,345	7,320
Production workers	5,287	5,149	5,120	5,121	5,123	5,122	5,121	5,105	5,103	5,105	5,098	5,090	5,112	5,061	5,049
Food and kindred products	1,683	1,677	1,673	1,673	1,675	1,674	1,681	1,672	1,671	1,678	1,675	1,679	1,680	1,669	1,664
Tobacco products	41	39	38	38	38	38	38	37	35	37	37	37	37	34	36
Textile mill products	598	560	552	550	552	549	548	549	549	548	545	542	544	541	539
Apparel and other textile products	766	692	678	674	672	669	666	665	665	665	660	652	656	644	635
Paper and allied products	677	668	666	665	665	665	664	663	662	662	661	663	662	660	657
Printing and publishing	1,565	1,553	1,551	1,551	1,549	1,548	1,549	1,550	1,551	1,554	1,552	1,558	1,561	1,560	1,560
Chemicals and allied products	1,043	1,034	1,031	1,032	1,031	1,030	1,031	1,031	1,031	1,030	1,028	1,028	1,026	1,023	1,026
Petroleum and coal products	139	134	133	133	132	132	132	132	132	132	132	132	131	133	131
Rubber and miscellaneous plastics products	1,005	1,006	1,005	1,008	1,009	1,011	1,011	1,010	1,010	1,007	1,008	1,008	1,014	1,006	998
Leather and leather products	84	78	77	77	76	76	76	76	76	75	75	74	76	75	74
SERVICE-PRODUCING	100,451	103,304	103,805	104,040	104,261	104,477	104,710	104,858	105,271	105,694	105,906	105,947	105,851	105,873	106,162
Transportation and public utilities	6,611	6,826	6,866	6,875	6,898	6,911	6,925	6,937	6,953	6,970	6,962	6,985	7,010	6,941	7,046
Transportation	4,273	4,409	4,436	4,441	4,453	4,459	4,470	4,479	4,492	4,509	4,501	4,510	4,546	4,548	4,558
Railroad transportation	231	230	226	226	226	226	225	225	222	221	219	217	219	221	220
Local and interurban passenger transit	469	485	488	489	490	491	493	494	494	498	498	493	502	504	505
Trucking and warehousing	1,744	1,805	1,816	1,818	1,823	1,818	1,827	1,828	1,833	1,839	1,834	1,834	1,846	1,844	1,850
Water transportation	181	187	189	190	190	192	192	196	197	200	200	202	199	204	202
Transportation by air	1,181	1,227	1,238	1,241	1,246	1,253	1,256	1,259	1,268	1,270	1,269	1,279	1,282	1,288	1,291
Pipelines, except natural gas	14	13	13	13	13	13	13	12	12	12	12	12	13	12	12
Transportation services	454	463	466	464	465	466	464	465	466	469	469	473	475	475	475
Communications and public utilities	2,338	2,416	2,430	2,434	2,445	2,452	2,455	2,458	2,461	2,461	2,461	2,475	2,474	2,393	2,488
Communications	1,477	1,552	1,565	1,572	1,581	1,588	1,591	1,598	1,602	1,604	1,606	1,619	1,618	1,538	1,632
Electric, gas, and sanitary services	861	865	865	862	864	864	864	860	859	857	855	856	856	855	856
Wholesale trade	6,800	6,924	6,962	6,973	6,989	7,002	7,005	7,011	7,017	7,055	7,048	7,049	7,050	7,062	7,065
Retail trade	22,295	22,788	22,844	22,863	22,893	22,936	22,973	22,987	23,027	23,197	23,064	23,122	23,196	23,188	23,189
Building materials and garden supplies	948	989	994	1,004	1,008	1,012	1,016	1,020	1,034	1,032	1,025	1,018	1,018	1,020	1,015
General merchandise stores	2,730	2,771	2,757	2,752	2,752	2,766	2,765	2,762	2,756	2,791	2,744	2,741	2,727	2,738	2,750
Department stores	2,415	2,431	2,414	2,408	2,406	2,416	2,419	2,417	2,409	2,443	2,388	2,386	2,373	2,390	2,399

See footnotes at end of table.

12. Continued—Employment of workers on nonfarm payrolls by industry, monthly data seasonally adjusted

[In thousands]

Industry	Annual average		1999				2000								
	1998	1999	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June	July	Aug.[P]	Sept.[P]
Food stores	3,484	3,495	3,495	3,496	3,498	3,501	3,501	3,503	3,502	3,522	3,516	3,515	3,519	3,522	3,525
Automotive dealers and service stations	2,332	2,369	2,372	2,377	2,380	2,386	2,399	2,394	2,407	2,410	2,408	2,412	2,411	2,417	2,420
New and used car dealers	1,047	1,079	1,087	1,089	1,092	1,094	1,097	1,100	1,105	1,106	1,107	1,110	1,111	1,114	1,118
Apparel and accessory stores	1,141	1,174	1,183	1,186	1,190	1,182	1,176	1,184	1,188	1,195	1,195	1,197	1,206	1,203	1,205
Furniture and home furnishings stores	1,025	1,082	1,092	1,093	1,091	1,098	1,099	1,102	1,111	1,113	1,113	1,118	1,119	1,121	1,120
Eating and drinking places	7,768	7,940	7,956	7,950	7,966	7,986	7,998	7,992	8,000	8,097	8,028	8,071	8,132	8,098	8,077
Miscellaneous retail establishments	2,868	2,969	2,995	3,005	3,008	3,005	3,019	3,021	3,029	3,037	3,035	3,050	3,064	3,069	3,077
Finance, insurance, and real estate	7,389	7,569	7,589	7,599	7,604	7,613	7,612	7,624	7,621	7,610	7,600	7,588	7,586	7,606	7,622
Finance	3,588	3,691	3,702	3,704	3,707	3,710	3,709	3,717	3,713	3,709	3,703	3,705	3,708	3,716	3,727
Depository institutions	2,046	2,061	2,063	2,063	2,061	2,059	2,058	2,057	2,054	2,052	2,044	2,042	2,036	2,037	2,036
Commercial banks	1,472	1,476	1,476	1,475	1,473	1,471	1,470	1,469	1,466	1,464	1,456	1,454	1,449	1,451	1,449
Savings institutions	256	252	250	250	250	248	247	245	243	243	243	242	240	240	239
Nondepository institutions	658	710	711	706	704	704	699	699	692	686	684	682	683	683	688
Security and commodity brokers	647	688	697	703	709	713	716	723	728	732	736	741	748	752	758
Holding and other investment offices	238	231	231	232	233	234	236	238	239	239	239	240	241	244	245
Insurance	2,335	2,371	2,376	2,378	2,375	2,378	2,372	2,373	2,373	2,365	2,361	2,359	2,354	2,357	2,355
Insurance carriers	1,591	1,611	1,610	1,612	1,608	1,610	1,606	1,606	1,605	1,597	1,594	1,593	1,585	1,587	1,584
Insurance agents, brokers, and service	744	761	766	766	767	768	766	767	768	768	767	766	769	770	771
Real estate	1,465	1,507	1,511	1,517	1,522	1,525	1,531	1,534	1,535	1,536	1,536	1,524	1,524	1,533	1,540
Services[1]	37,533	39,027	39,321	39,482	39,606	39,707	39,844	39,914	40,090	40,195	40,220	40,401	40,403	40,578	40,778
Agricultural services	708	766	770	774	782	782	806	796	812	801	790	788	794	799	799
Hotels and other lodging places	1,789	1,848	1,863	1,863	1,868	1,868	1,866	1,868	1,885	1,902	1,904	1,922	1,925	1,923	1,927
Personal services	1,201	1,233	1,243	1,247	1,252	1,257	1,263	1,265	1,265	1,272	1,262	1,271	1,273	1,285	1,284
Business services	8,618	9,267	9,404	9,465	9,502	9,538	9,571	9,615	9,681	9,735	9,715	9,773	9,768	9,809	9,925
Services to buildings	950	985	994	997	998	997	997	1,000	1,004	1,001	996	997	1,002	997	998
Personnel supply services	3,278	3,601	3,678	3,712	3,734	3,748	3,753	3,773	3,817	3,885	3,855	3,873	3,851	3,873	3,907
Help supply services	2,956	3,228	3,298	3,327	3,343	3,358	3,361	3,382	3,418	3,485	3,440	3,444	3,433	3,444	3,513
Computer and data processing services	1,615	1,831	1,866	1,874	1,880	1,888	1,896	1,906	1,915	1,927	1,929	1,933	1,950	1,954	1,958
Auto repair services and parking	1,145	1,184	1,186	1,191	1,191	1,192	1,194	1,195	1,192	1,195	1,192	1,191	1,194	1,198	1,200
Miscellaneous repair services	376	377	377	379	379	382	382	384	384	383	383	384	384	385	386
Motion pictures	576	610	619	624	625	624	626	623	630	634	632	635	634	635	634
Amusement and recreation services	1,594	1,660	1,672	1,691	1,701	1,703	1,721	1,723	1,729	1,752	1,755	1,789	1,795	1,808	1,793
Health services	9,853	9,989	10,015	10,027	10,041	10,053	10,066	10,078	10,091	10,093	10,104	10,116	10,143	10,157	10,183
Offices and clinics of medical doctors	1,806	1,877	1,888	1,893	1,898	1,903	1,910	1,914	1,920	1,925	1,928	1,928	1,930	1,933	1,945
Nursing and personal care facilities	1,772	1,785	1,785	1,785	1,785	1,787	1,788	1,790	1,791	1,789	1,788	1,786	1,787	1,792	1,793
Hospitals	3,930	3,982	3,989	3,992	3,992	3,997	4,001	4,002	4,004	3,999	4,005	4,008	4,018	4,020	4,034
Home health care services	666	636	635	636	637	637	638	639	639	641	641	642	645	645	642
Legal services	971	997	1,000	1,003	1,005	1,007	1,008	1,007	1,007	1,004	1,006	1,009	1,012	1,014	1,013
Educational services	2,178	2,276	2,294	2,299	2,305	2,309	2,308	2,309	2,329	2,329	2,356	2,374	2,374	2,389	2,388
Social services	2,646	2,800	2,823	2,845	2,868	2,884	2,905	2,912	2,929	2,940	2,946	2,945	2,919	2,960	2,995
Child day care services	621	695	701	708	721	729	737	740	749	753	758	760	768	776	765
Residential care	744	775	785	790	795	800	803	807	810	812	816	820	826	828	833
Museums and botanical and zoological gardens	94	98	98	99	99	99	100	100	101	102	101	103	103	103	102
Membership organizations	2,372	2,425	2,430	2,431	2,434	2,438	2,439	2,439	2,440	2,439	2,438	2,441	2,429	2,433	2,450
Engineering and management services	3,139	3,254	3,283	3,300	3,310	3,327	3,344	3,354	3,369	3,368	3,390	3,415	3,411	3,435	3,454
Engineering and architectural services	908	953	956	964	969	974	982	984	985	987	995	1,005	1,007	1,010	1,013
Management and public relations	1,000	1,038	1,044	1,054	1,058	1,068	1,074	1,077	1,085	1,088	1,096	1,110	1,107	1,116	1,121
Government	19,823	20,170	20,223	20,248	20,271	20,308	20,351	20,394	20,547	20,667	21,012	20,802	20,606	20,498	20,462
Federal	2,686	2,669	2,655	2,647	2,646	2,646	2,663	2,700	2,816	2,885	3,238	3,092	2,819	2,657	2,624
Federal, except Postal Service	1,819	1,796	1,785	1,779	1,780	1,780	1,797	1,835	1,951	2,022	2,374	2,230	1,954	1,790	1,761
State	4,612	4,695	4,714	4,722	4,723	4,727	4,725	4,728	4,733	4,744	4,737	4,716	4,774	4,763	4,767
Education	1,922	1,968	1,978	1,979	1,980	1,983	1,981	1,981	1,982	1,990	1,983	1,967	1,994	2,000	1,997
Other State government	2,690	2,727	2,736	2,743	2,743	2,744	2,744	2,747	2,751	2,754	2,754	2,749	2,750	2,763	2,770
Local	12,525	12,806	12,854	12,879	12,902	12,935	12,963	12,966	12,998	13,038	13,037	12,994	13,043	13,078	13,071
Education	7,085	7,272	7,299	7,308	7,323	7,343	7,358	7,355	7,373	7,408	7,395	7,361	7,394	7,400	7,390
Other local government	5,440	5,534	5,555	5,571	5,579	5,592	5,607	5,611	5,625	5,630	5,642	5,633	5,649	5,678	5, 661

[1] Includes other industries not shown separately.

[P] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

13. Average weekly hours of production or nonsupervisory workers on private nonfarm payrolls, by industry, monthly data seasonally adjusted

Industry	Annual average		1999				2000								
	1998	1999	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.[P]	Sept.[P]
PRIVATE SECTOR	34.6	34.5	34.5	34.5	34.5	34.5	34.5	34.6	34.5	34.6	34.4	34.5	34.4	34.3	34.4
GOODS-PRODUCING	41.0	41.0	41.2	41.1	41.3	41.0	41.1	41.3	41.2	41.5	40.9	40.9	41.1	40.8	40.5
MINING	43.9	43.8	44.3	44.1	44.2	44.3	44.7	44.7	44.7	45.3	44.1	44.7	45.3	44.6	44.7
MANUFACTURING	41.7	41.7	41.8	41.8	41.7	41.7	41.7	41.8	41.7	42.2	41.4	41.6	41.7	41.3	41.2
Overtime hours	4.6	4.6	4.7	4.7	4.7	4.7	4.6	4.7	4.6	4.9	4.5	4.6	4.6	4.5	4.4
Durable goods	42.3	42.2	42.4	42.3	42.2	42.2	42.3	42.3	42.3	42.8	42.0	42.2	42.4	41.9	41.7
Overtime hours	4.8	4.8	4.9	4.8	4.8	4.8	4.8	4.9	4.8	5.1	4.7	4.8	4.7	4.6	4.5
Lumber and wood products	41.1	41.2	41.1	41.1	41.1	41.0	41.1	41.0	40.9	41.2	40.7	40.8	41.1	40.3	40.2
Furniture and fixtures	40.5	40.3	40.4	40.1	39.9	40.2	40.2	40.3	40.2	40.6	40.3	39.9	39.7	39.4	39.2.
Stone, clay, and glass products	43.5	43.5	43.5	43.5	43.8	43.5	43.6	43.5	43.4	43.6	43.0	42.9	43.7	43.2	43.1
Primary metal industries	44.2	44.2	44.5	44.3	44.3	44.4	44.5	44.5	44.4	44.9	43.8	43.9	44.3	43.6	43.6
Blast furnaces and basic steel products	44.6	44.8	45.0	45.2	45.3	45.4	45.3	45.4	45.2	45.0	44.7	45.0	45.0	44.2	44.1
Fabricated metal products	42.3	42.2	42.3	42.2	42.1	42.1	42.4	42.4	42.5	43.0	42.3	42.4	42.6	42.0	41.9
Industrial machinery and equipment	42.8	42.2	42.4	42.3	42.2	42.2	42.3	42.3	42.3	42.9	42.2	42.5	42.6	42.1	41.8
Electronic and other electrical equipment	41.4	41.4	41.6	41.6	41.4	41.5	41.6	41.6	41.8	42.2	41.3	41.4	41.9	41.1	41.1
Transportation equipment	43.4	43.8	44.0	43.8	43.6	43.4	43.8	44.0	43.7	44.3	43.2	44.0	43.9	43.4	42.7
Motor vehicles and equipment	43.5	45.0	45.4	45.0	44.7	44.5	45.0	45.0	44.6	45.5	44.2	45.3	44.5	44.6	43.3
Instruments and related products	41.3	41.5	41.5	41.5	41.5	41.5	41.3	41.2	41.2	41.6	41.2	41.3	41.6	41.1	41.3
Miscellaneous manufacturing	39.9	39.8	39.9	39.8	39.7	39.7	39.5	39.5	39.4	39.8	39.3	39.4	39.7	39.5	39.4
Nondurable goods	40.9	40.9	41.0	41.0	41.0	40.9	40.9	41.0	40.9	41.3	40.6	40.7	40.7	40.6	40.5
Overtime hours	4.3	4.4	4.4	4.5	4.5	4.5	4.4	4.5	4.3	4.6	4.3	4.3	4.3	4.2	4.2
Food and kindred products	41.7	41.8	41.7	41.9	41.8	41.7	41.6	41.6	41.6	41.9	41.2	41.5	41.2	41.5	41.4
Textile mill products	41.0	40.9	40.9	41.2	41.3	41.2	41.1	41.7	41.6	41.9	41.1	41.1	40.5	39.9	40.6
Apparel and other textile products	37.3	37.5	37.4	37.5	37.4	37.5	37.6	37.7	37.8	38.0	37.1	37.0	37.3	36.9	36.7
Paper and allied products	43.4	43.5	43.4	43.5	43.4	43.3	43.3	43.5	43.2	43.6	42.8	42.8	42.4	42.4	42.4
Printing and publishing	38.3	38.2	38.3	38.3	38.3	38.3	38.3	38.3	38.2	38.5	38.0	38.2	38.1	37.9	37.9
Chemicals and allied products	43.2	43.0	43.2	43.0	43.0	43.0	42.9	42.7	42.6	42.9	42.7	42.9	43.4	43.0	42.9
Rubber and miscellaneous plastics products	41.7	41.7	41.8	41.5	41.5	41.5	41.6	41.6	41.5	42.1	41.3	41.4	41.4	41.2	41.1
Leather and leather products	37.6	37.8	37.5	37.6	37.7	37.4	37.8	38.1	38.0	38.9	38.2	37.8	37.1	37.2	37.3
SERVICE-PRODUCING	32.9	32.8	32.8	32.9	32.8	32.9	32.9	32.8	32.8	32.8	32.7	32.9	32.7	32.7	32.8
TRANSPORTATION AND PUBLIC UTILITIES	39.5	38.7	38.6	38.4	38.3	38.4	38.4	38.3	38.3	38.7	38.4	38.4	38.8	38.4	38.7
WHOLESALE TRADE	38.3	38.3	38.4	38.6	38.4	38.5	38.6	38.5	38.6	38.6	38.6	38.6	38.5	38.3	38.5
RETAIL TRADE	29.0	29.0	28.8	29.0	29.0	29.1	29.1	29.1	29.0	28.8	28.8	29.0	28.8	28.8	28.8

[P] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

14. Average hourly earnings of production or nonsupervisory workers on private nonfarm payrolls, by industry, seasonally adjusted

Industry	Annual average		1999				2000								
	1998	1999	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.[P]	Sept.[P]
PRIVATE SECTOR (in current dollars)	$ 12.78	$ 13.24	$13.35	$13.38	$13.41	$13.44	$13.49	$13.54	$13.58	$13.64	$13.66	$13.70	$13.75	$13.80	$13.83
Goods-producing	14.34	14.84	14.96	14.99	15.03	15.05	15.13	15.20	15.25	15.30	15.29	15.34	15.40	15.46	15.47
Mining	16.91	17.09	17.14	17.09	17.00	17.04	17.09	17.14	17.27	17.26	17.25	17.24	17.23	17.05	17.19
Construction	16.61	17.18	17.26	17.33	17.37	17.44	17.50	17.60	17.67	17.78	17.75	17.77	17.90	17.94	17.98
Manufacturing	13.49	13.91	14.04	14.06	14.07	14.10	14.15	14.21	14.23	14.28	14.27	14.36	14.39	14.44	14.44
Excluding overtime	12.79	13.18	13.29	13.31	13.33	13.36	13.41	13.45	13.47	13.49	13.53	13.60	13.64	13.69	13.74
Service-producing	12.27	12.73	12.83	12.86	12.89	12.93	12.97	13.01	13.05	13.11	13.15	13.19	13.23	13.28	13.33
Transportation and public utilities	15.31	15.69	15.79	15.79	15.84	15.94	15.92	16.00	16.04	16.12	16.22	16.28	16.17	16.26	16.27
Wholesale trade	14.07	14.58	14.70	14.75	14.76	14.83	14.90	14.89	14.98	15.03	15.02	15.16	15.22	15.23	15.37
Retail trade	8.74	9.08	9.16	9.18	9.21	9.25	9.26	9.32	9.35	9.39	9.39	9.43	9.45	9.50	9.54
Finance, insurance, and real estate	14.07	14.62	14.71	14.73	14.76	14.78	14.86	14.87	14.95	14.98	15.01	15.05	15.03	15.12	15.18
Services	12.84	13.36	13.46	13.51	13.53	13.57	13.61	13.66	13.69	13.74	13.79	13.82	13.89	13.94	13.97
PRIVATE SECTOR (in constant (1982) dollars)	7.75	7.86	7.87	7.86	7.87	7.87	7.87	7.88	7.87	7.84	7.87	7.88	7.86	7.90	–

– Data not available.

[P] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

15. Average hourly earnings of production or nonsupervisory workers on private nonfarm payrolls, by industry

Industry	Annual average		1999				2000								
	1998	1999	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.[P]	Sept.[P]
PRIVATE SECTOR	$12.78	$13.24	$13.38	$13.41	$13.43	$13.46	$13.58	$13.58	$13.59	$13.69	$13.64	$13.62	$13.68	$13.67	$13.88
MINING	16.91	17.09	17.13	17.05	17.01	17.19	17.30	17.20	17.28	17.29	17.19	17.09	17.13	16.94	17.19
CONSTRUCTION	16.61	17.18	17.46	17.54	17.42	17.47	17.39	17.42	17.54	17.66	17.71	17.74	17.95	18.05	18.19
MANUFACTURING	13.49	13.91	14.11	14.03	14.08	14.20	14.19	14.19	14.22	14.28	14.27	14.34	14.37	14.38	14.51
Durable goods	13.98	14.40	14.62	14.55	14.58	14.73	14.72	14.73	14.76	14.82	14.80	14.90	14.86	14.94	15.06
Lumber and wood products	11.10	11.47	11.56	11.60	11.60	11.64	11.67	11.63	11.62	11.73	11.74	11.82	11.87	11.83	11.90
Furniture and fixtures	10.90	11.23	11.33	11.33	11.36	11.47	11.47	11.51	11.59	11.64	11.69	11.73	11.80	11.82	11.89
Stone, clay, and glass products	13.59	13.87	14.10	14.00	14.04	13.97	13.94	13.96	14.03	14.23	14.28	14.36	14.42	14.41	14.54
Primary metal industries	15.48	15.83	16.18	16.01	16.12	16.17	16.20	16.28	16.34	16.51	16.40	16.52	16.68	16.55	16.67
Blast furnaces and basic steel products	18.42	18.81	18.99	18.90	19.11	19.09	19.16	19.32	19.49	19.72	19.46	19.62	19.78	19.49	19.63
Fabricated metal products	13.07	13.48	13.64	13.52	13.59	13.72	13.71	13.67	13.69	13.75	13.75	13.82	13.82	13.90	14.03
Industrial machinery and equipment	14.47	15.02	15.24	15.18	15.22	15.36	15.39	15.40	15.43	15.42	15.45	15.51	15.61	15.66	15.74
Electronic and other electrical equipment	13.10	13.46	13.64	13.60	13.61	13.73	13.77	13.72	13.70	13.70	13.65	13.72	13.79	13.79	13.88
Transportation equipment	17.51	18.04	18.50	18.41	18.39	18.72	18.57	18.58	18.70	18.82	18.79	19.01	18.66	19.04	19.25
Motor vehicles and equipment	17.84	18.41	18.96	18.85	18.80	19.22	18.99	19.03	19.17	19.36	19.35	19.62	19.07	19.61	19.78
Instruments and related products	13.81	14.17	14.29	14.36	14.34	14.41	14.38	14.41	14.40	14.40	14.44	14.49	14.65	14.63	14.72
Miscellaneous manufacturing	10.88	11.30	11.43	11.45	11.41	11.54	11.52	11.53	11.55	11.58	11.59	11.60	11.65	11.62	11.73
Nondurable goods	12.76	13.16	13.33	13.25	13.31	13.39	13.37	13.36	13.37	13.45	13.43	13.48	13.61	13.53	13.67
Food and kindred products	11.80	12.09	12.18	12.09	12.19	12.28	12.23	12.23	12.27	12.36	12.36	12.39	12.46	12.40	12.55
Tobacco products	18.56	19.07	18.90	17.82	18.02	18.03	17.21	17.48	19.10	19.71	20.40	20.87	21.08	20.92	19.15
Textile mill products	10.39	10.71	10.78	10.73	10.80	10.84	10.84	10.85	10.86	10.94	10.91	10.91	10.97	10.98	11.08
Apparel and other textile products	8.52	8.86	9.01	8.99	8.98	9.04	9.03	9.03	9.05	9.05	9.05	9.07	9.06	9.08	9.19
Paper and allied products	15.50	15.94	16.24	16.09	16.08	16.12	16.02	15.99	16.00	16.15	16.12	16.18	16.29	16.18	16.31
Printing and publishing	13.46	13.84	13.98	13.98	14.02	14.12	14.10	14.13	14.18	14.20	14.15	14.15	14.29	14.29	14.47
Chemicals and allied products	17.09	17.38	17.67	17.61	17.64	17.67	17.70	17.67	17.63	17.77	17.80	17.91	18.17	18.00	18.12
Petroleum and coal products	20.91	21.39	21.55	21.62	21.76	21.76	21.62	22.03	22.24	21.77	21.34	21.19	21.24	21.01	21.39
Rubber and miscellaneous plastics products	11.89	12.36	12.51	12.42	12.46	12.57	12.61	12.57	12.58	12.67	12.65	12.72	12.84	12.81	12.90
Leather and leather products	9.35	9.77	9.95	9.91	9.93	10.01	10.08	9.96	10.01	10.13	10.05	10.08	10.08	10.15	10.26
TRANSPORTATION AND PUBLIC UTILITIES	15.31	15.69	15.80	15.78	15.90	15.96	15.98	16.05	16.02	16.15	16.13	16.17	16.19	16.22	16.28
WHOLESALE TRADE	14.07	14.58	14.68	14.74	17.76	14.85	14.99	14.91	14.83	15.14	14.99	15.04	15.25	15.16	15.35
RETAIL TRADE	8.74	9.08	9.19	9.21	9.22	9.26	9.33	9.35	9.37	9.42	9.39	9.38	9.38	9.41	9.57
FINANCE, INSURANCE, AND REAL ESTATE	14.07	14.62	14.64	14.69	14.74	14.76	14.99	14.93	14.97	15.12	15.02	14.93	15.01	14.99	15.11
SERVICES	12.84	13.36	13.45	13.51	13.57	13.65	13.78	13.77	13.77	13.83	13.76	13.68	13.74	13.70	13.96

[P] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

16. Average weekly earnings of production or nonsupervisory workers on private nonfarm payrolls, by industry

Industry	Annual average		1999				2000								
	1998	1999	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.[P]	Sept.[P]
PRIVATE SECTOR															
Current dollars	$442.19	$456.78	$458.93	$463.99	$463.34	$465.72	$467.15	$464.44	$464.78	$473.67	$467.85	$471.25	$477.43	$474.35	$477.47
Seasonally adjusted	–	–	460.58	461.61	462.65	463.68	465.41	468.48	468.51	471.94	469.90	472.65	473.00	473.34	476.75
Constant (1982) dollars	268.32	271.25	269.96	272.45	271.91	273.31	273.51	270.50	268.35	273.32	269.65	270.06			
MINING	742.35	748.54	758.86	758.73	758.65	763.24	766.39	758.52	758.59	776.32	763.24	770.76	775.99	762.30	780.43
CONSTRUCTION	646.13	671.74	673.96	701.60	688.09	677.84	664.04	674.15	680.55	692.27	701.32	702.50	723.39	725.61	727.60
MANUFACTURING															
Current dollars	562.53	580.05	588.39	589.26	594.18	603.50	590.30	588.89	590.13	595.48	590.78	597.98	590.61	595.33	605.07
Constant (1982) dollars	341.34	344.45	346.11	346.01	348.70	354.17	345.61	342.98	340.72	343.61	340.51	342.68			
Durable goods	591.35	607.68	615.50	618.38	622.57	634.86	621.18	620.13	622.87	628.37	623.08	630.27	618.18	625.99	635.53
Lumber and wood products	456.21	472.56	472.80	480.24	480.24	480.73	474.97	469.85	470.61	482.10	480.17	485.80	483.11	482.66	484.33
Furniture and fixtures	441.45	452.57	456.60	458.87	458.94	471.42	459.95	458.10	462.44	464.44	465.26	468.03	462.56	470.44	476.79
Stone, clay, and glass products	591.17	603.35	620.40	616.00	620.57	604.90	591.06	591.90	596.28	614.74	621.18	624.66	631.60	631.16	638.31
Primary metal industries	684.22	699.69	716.77	709.24	720.56	732.50	722.52	722.83	723.86	734.70	721.60	728.53	725.58	718.27	730.15
Blast furnaces and basic steel products	821.53	842.69	852.65	848.61	865.68	878.14	867.95	875.20	875.10	891.34	873.75	882.90	888.12	859.51	863.72
Fabricated metal products	552.86	568.86	571.52	574.60	580.29	594.08	579.93	576.87	577.72	583.00	581.63	587.35	576.29	583.80	594.87
Industrial machinery and equipment	619.32	633.84	635.51	640.60	646.85	663.55	654.08	652.96	654.23	655.35	653.54	659.18	654.06	656.15	662.65
Electronic and other electrical equipment	542.34	557.24	563.33	568.48	572.98	582.15	572.83	569.38	571.29	569.92	561.02	569.38	566.77	566.77	576.02
Transportation equipment	759.93	790.15	812.15	810.04	811.00	838.66	811.51	815.66	819.06	829.96	817.37	836.44	781.85	820.62	837.39
Motor vehicles and equipment	776.04	828.45	860.78	852.02	849.76	887.96	850.75	856.35	860.73	880.88	866.88	888.79	800.94	864.80	878.23
Instruments and related products	570.35	588.06	587.32	594.50	600.85	612.43	595.33	595.13	593.28	594.72	592.04	596.99	600.65	599.83	607.94
Miscellaneous manufacturing	434.11	449.74	453.77	459.15	459.82	466.22	450.43	453.13	456.23	456.25	454.33	458.20	453.19	460.15	468.03
Nondurable goods	521.88	538.24	546.53	547.23	551.03	557.02	544.16	542.42	542.82	548.76	543.92	549.98	549.84	549.32	560.47
Food and kindred products	492.06	505.36	512.62	512.62	518.08	520.67	505.10	500.21	501.84	506.76	506.76	512.95	513.35	517.08	529.61
Tobacco products	710.85	762.80	754.11	753.79	774.86	793.32	672.91	685.22	741.08	782.49	811.92	836.89	832.66	840.98	794.73
Textile mill products	425.99	438.04	438.75	445.30	449.28	453.11	443.36	448.11	450.69	456.20	448.40	451.67	450.29	450.18	454.28
Apparel and other textile products	317.80	332.25	331.57	338.92	337.65	343.52	335.92	339.53	342.09	341.19	336.66	339.22	333.41	335.96	339.11
Paper and allied products	672.70	693.39	709.69	704.74	704.30	712.50	695.27	687.57	686.40	696.07	686.71	692.50	687.44	681.18	696.44
Printing and publishing	515.52	528.69	539.63	539.63	543.98	550.68	534.39	536.94	540.26	542.44	533.46	534.87	540.16	543.02	555.65
Chemicals and allied products	738.29	747.34	765.11	758.99	765.58	772.18	757.56	750.98	749.28	757.00	756.50	768.34	779.49	772.20	780.97
Petroleum and coal products	911.68	921.91	930.96	933.98	935.68	937.86	933.98	956.10	969.66	966.59	919.75	923.88	955.80	926.54	956.13
Rubber and miscellaneous plastics products	495.81	515.41	520.42	516.67	523.32	532.97	523.32	520.40	520.81	528.34	523.71	529.15	522.59	525.21	534.06
Leather and leather products	351.56	369.31	372.13	374.60	378.33	375.75	372.96	375.49	379.38	388.99	384.92	387.07	365.90	384.69	388.85
TRANSPORTATION AND PUBLIC UTILITIES	604.75	607.20	608.30	605.95	608.97	612.86	612.03	611.51	608.76	626.62	616.17	622.55	634.65	630.96	633.29
WHOLESALE TRADE	538.88	558.41	560.78	567.49	566.78	570.24	578.61	568.07	566.51	588.95	575.62	579.04	591.70	580.63	589.44
RETAIL TRADE	253.46	263.32	264.67	266.17	264.61	271.32	265.91	266.48	267.98	272.24	270.43	274.83	279.52	277.60	275.62
FINANCE, INSURANCE, AND REAL ESTATE	512.15	529.24	528.50	530.31	530.64	534.31	551.63	538.97	537.42	554.90	539.22	540.47	550.87	541.14	545.47
SERVICES	418.58	435.54	434.44	441.78	443.74	444.99	450.61	448.90	447.53	453.62	445.82	447.34	453.42	450.73	453.70

[P] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision. Dash indicates data not available.

17. Diffusion indexes of employment change, seasonally adjusted

[In percent]

Timespan and year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov	Dec.
	Private nonfarm payrolls, 356 industries											
Over 1-month span:												
1998	63.2	56.6	60.5	58.7	58.3	59.7	53.9	58.1	56.2	53.8	59.0	57.4
1999	54.1	58.8	53.9	59.6	52.8	57.9	58.8	53.8	57.3	60.7	60.8	59.0
2000	60.8	54.1	60.7	56.5	45.9	56.2	58.7	50.8	52.4	–	–	–
Over 3-month span:												
1998	64.3	66.6	63.2	66.3	63.6	58.0	57.4	57.9	59.7	58.1	58.6	59.4
1999	58.3	57.3	58.4	54.4	57.3	58.8	58.1	60.7	59.6	63.5	64.3	63.1
2000	61.0	62.6	61.9	57.4	56.7	58.3	56.9	54.8	–	–	–	–
Over 6-month span:												
1998	69.8	67.4	65.2	61.8	62.9	61.4	59.0	58.4	57.4	59.7	59.3	59.1
1999	60.0	58.0	57.6	58.6	54.4	59.7	60.4	62.1	64.0	62.8	65.2	64.6
2000	65.6	60.8	61.0	61.9	59.1	54.8	–	–	–	–	–	–
Over 12-month span:												
1998	69.7	67.3	67.3	65.9	63.9	62.5	61.5	62.1	61.0	59.8	59.8	58.1
1999	60.3	58.3	57.6	59.4	59.6	60.5	61.9	61.0	62.6	62.9	62.5	63.2
2000	65.0	63.5	60.1	–	–	–	–	–	–	–	–	–
	Manufacturing payrolls, 139 industries											
Over 1-month span:												
1998	57.9	50.7	53.6	50.7	47.1	50.0	37.8	50.0	45.7	39.9	41.7	43.9
1999	45.0	41.0	42.8	46.4	40.3	46.4	54.7	38.1	46.4	51.8	51.4	50.4
2000	52.2	47.8	51.1	51.1	45.7	51.1	57.6	37.4	37.4	–	–	–
Over 3-month span:												
1998	56.8	56.8	52.2	52.2	48.6	41.4	39.2	40.3	43.2	37.1	36.7	40.6
1999	36.7	37.1	37.1	34.5	37.8	43.5	39.9	45.0	42.1	50.4	51.1	50.7
2000	47.8	52.5	49.3	48.9	49.6	53.6	44.6	34.2	–	–	–	–
Over 6-month span:												
1998	60.1	54.3	50.4	39.9	43.5	42.1	38.8	36.7	36.0	39.9	34.5	32.7
1999	35.6	33.5	33.5	37.1	32.7	38.8	41.0	45.7	48.2	43.2	48.6	51.1
2000	51.4	47.5	50.4	53.6	45.3	34.9	–	–	–	–	–	–
Over 12-month span:												
1998	55.0	51.8	51.8	46.8	40.6	39.9	37.8	38.1	37.1	36.0	34.2	33.5
1999	37.4	32.4	31.7	35.3	36.0	37.1	38.8	39.6	42.4	42.4	42.4	46.0
2000	47.8	44.2	36.3	–	–	–	–	–	–	–	–	–

– Data not available.

NOTE: Figures are the percent of industries with employment increasing plus one-half of the industries with unchanged employment, where 50 percent indicates an equal balance between industries with increasing and decreasing employment. Data for the 2 most recent months shown in each span are preliminary. See the "Definitions" in this section. See "Notes on the data" for a description of the most recent benchmark revision.

18. Annual data: Employment status of the population

[Numbers in thousands]

Employment status	1991	1992	1993	1994	1995	1996	1997	1998	1999
Civilian noninstitutional population	190,925	192,805	194,838	196,814	198,584	200,591	203,133	205,220	207,753
Civilian labor force	126,346	128,105	129,200	131,056	132,304	133,943	136,297	137,673	139,368
Labor force participation rate	66.2	66.4	66.3	66.6	66.6	66.8	67.1	67.1	67.1
Employed	117,718	118,492	120,259	123,060	124,900	126,708	129,558	131,463	133,488
Employment-population ratio	61.7	61.5	61.7	62.5	62.9	63.2	63.8	64.1	64.3
Agriculture	3,269	3,247	3,115	3,409	3,440	3,443	3,399	3,378	3,281
Nonagricultural industries	114,499	115,245	117,144	119,651	121,460	123,264	126,159	128,085	130,207
Unemployed	8,628	9,613	8,940	7,996	7,404	7,236	6,739	6,210	5,880
Unemployment rate	6.8	7.5	6.9	6.1	5.6	5.4	4.9	4.5	4.2
Not in the labor force	64,578	64,700	65,638	65,758	66,280	66,647	66,837	67,547	68,385

19. Annual data: Employment levels by industry

[In thousands]

Industry	1991	1992	1993	1994	1995	1996	1997	1998	1999
Total employment	108,249	108,601	110,713	114,163	117,191	119,608	122,690	125,865	128,786
Private sector	89,847	89,956	91,872	95,036	97,885	100,189	103,133	106,042	108,616
Goods-producing	23,745	23,231	23,352	23,908	24,265	24,493	24,962	25,414	25,482
Mining	689	635	610	601	581	580	596	590	535
Construction	4,650	4,492	4,668	4,986	5,160	5,418	5,691	6,020	6,404
Manufacturing	18,406	18,104	18,075	18,321	18,524	18,495	18,675	18,805	18,543
Service-producing	84,504	85,370	87,361	90,256	92,925	95,115	97,727	100,451	103,304
Transportation and public utilities	5,755	5,718	5,811	5,984	6,132	6,253	6,408	6,611	6,826
Wholesale trade	6,081	5,997	5,981	6,162	6,378	6,482	6,648	6,800	6,924
Retail trade	19,284	19,356	19,773	20,507	21,187	21,597	21,966	22,295	22,788
Finance, insurance, and real estate	6,646	6,602	6,757	6,896	6,806	6,911	7,109	7,389	7,569
Services	28,336	29,052	30,197	31,579	33,117	34,454	36,040	37,533	39,027
Government	18,402	18,645	18,841	19,128	19,305	19,419	19,557	19,823	20,170
Federal	2,966	2,969	2,915	2,870	2,822	2,757	2,699	2,686	2,669
State	4,355	4,408	4,488	4,576	4,635	4,606	4,582	4,612	4,695
Local	11,081	11,267	11,438	11,682	11,849	12,056	12,276	12,525	12,806

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

20. Annual data: Average hours and earnings of production or nonsupervisory workers on nonfarm payrolls, by industry

Industry	1991	1992	1993	1994	1995	1996	1997	1998	1999
Private sector:									
Average weekly hours	34.3	34.4	34.5	34.7	34.5	34.4	34.6	34.6	34.5
Average hourly earnings (in dollars)	10.32	10.57	10.83	11.12	11.43	11.82	12.28	12.78	13.24
Average weekly earnings (in dollars)	353.98	363.61	373.64	385.86	394.34	406.61	424.89	442.19	456.78
Mining:									
Average weekly hours	44.4	43.9	44.3	44.8	44.7	45.3	45.4	43.9	43.8
Average hourly earnings (in dollars)	14.19	14.54	14.60	14.88	15.30	15.62	16.15	16.91	17.09
Average weekly earnings (in dollars)	630.04	638.31	646.78	666.62	683.91	707.59	733.21	742.35	748.54
Construction:									
Average weekly hours	38.1	38.0	38.5	38.9	38.9	39.0	39.0	38.9	39.1
Average hourly earnings (in dollars)	14.00	14.15	14.38	14.73	15.09	15.47	16.04	16.61	17.18
Average weekly earnings (in dollars)	533.40	537.70	553.63	573.00	587.00	603.33	625.56	646.13	671.74
Manufacturing:									
Average weekly hours	40.7	41.0	41.4	42.0	41.6	41.6	42.0	41.7	41.7
Average hourly earnings (in dollars)	11.18	11.46	11.74	12.07	12.37	12.77	13.17	13.49	13.91
Average weekly earnings (in dollars)	455.03	469.86	486.04	506.94	514.59	531.23	553.14	562.53	580.05
Transportation and public utilities:									
Average weekly hours	38.1	38.3	39.3	39.7	39.4	39.6	39.7	39.5	38.7
Average hourly earnings (in dollars)	13.20	13.43	13.55	13.78	14.13	14.45	14.92	15.31	15.69
Average weekly earnings (in dollars)	502.92	514.37	532.52	547.07	556.72	572.22	592.32	604.75	607.20
Wholesale trade:									
Average weekly hours	38.1	38.2	38.2	38.4	38.3	38.3	38.4	38.3	38.3
Average hourly earnings (in dollars)	11.15	11.39	11.74	12.06	12.43	12.87	13.45	14.07	14.58
Average weekly earnings (in dollars)	424.82	435.10	448.47	463.10	476.07	492.92	516.48	538.88	558.41
Retail trade:									
Average weekly hours	28.6	28.8	28.8	28.9	28.8	28.8	28.9	29.0	29.0
Average hourly earnings (in dollars)	6.94	7.12	7.29	7.49	7.69	7.99	8.33	8.74	9.08
Average weekly earnings (in dollars)	198.48	205.06	209.95	216.46	221.47	230.11	240.74	253.46	263.32
Finance, insurance, and real estate:									
Average weekly hours	35.7	35.8	35.8	35.8	35.9	35.9	36.1	36.4	36.2
Average hourly earnings (in dollars)	10.39	10.82	11.35	11.83	12.32	12.80	13.34	14.07	14.62
Average weekly earnings (in dollars)	370.92	387.36	406.33	423.51	442.29	459.52	481.57	512.15	529.24
Services:									
Average weekly hours	32.4	32.5	32.5	32.5	32.4	32.4	32.6	32.6	32.6
Average hourly earnings (in dollars)	10.23	10.54	10.78	11.04	11.39	11.79	12.28	12.84	13.36
Average weekly earnings (in dollars)	331.45	342.55	350.35	358.80	369.04	382.00	400.33	418.58	435.54

21. Employment Cost Index, compensation,[1] by occupation and industry group

[June 1989 = 100]

Series	1998			1999				2000		Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended	12 months ended
										June 2000	
Civilian workers[2]	137.4	139.0	139.8	140.4	141.8	143.3	144.6	146.5	148.0	1.0	4.4
Workers, by occupational group:											
White-collar workers	138.7	140.6	141.4	141.9	143.3	145.0	146.3	148.4	149.9	1.0	4.6
Professional specialty and technical	138.3	140.0	141.0	141.3	142.2	143.9	145.3	146.7	148.3	1.1	4.3
Executive, adminitrative, and managerial	139.7	141.7	141.8	143.5	145.4	147.3	148.6	150.5	151.9	.9	4.5
Administrative support, including clerical	139.3	140.4	141.3	142.5	143.4	144.7	146.1	148.6	150.1	1.0	4.7
Blue-collar workers	134.3	135.3	136.1	137.1	138.3	139.5	140.6	142.7	144.1	1.0	4.2
Service occupations	137.9	139.4	140.0	141.3	142.4	143.1	144.8	146.0	147.1	.8	3.3
Workers, by industry division:											
Goods-producing	136.3	137.2	137.9	139.0	140.0	141.2	142.5	144.9	146.6	1.2	4.7
Manufacturing	137.2	138.2	138.9	139.9	140.9	142.1	143.6	146.0	147.5	1.0	4.7
Service-producing	137.7	139.6	140.4	140.9	142.4	144.0	145.3	147.1	148.4	.9	4.2
Services	139.0	140.8	141.7	142.3	143.2	145.1	146.5	148.0	149.3	.9	4.3
Health services	138.5	139.1	139.1	140.5	141.4	142.7	144.3	145.9	147.5	1.1	4.3
Hospitals	138.2	139.4	140.2	141.3	142.2	143.4	145.0	146.3	147.7	1.0	3.9
Educational services	137.7	140.2	141.0	141.3	141.7	144.6	145.8	146.5	146.8	.2	3.6
Public administration[3]	137.4	138.9	139.9	140.8	141.5	142.4	144.4	145.7	146.1	.3	3.3
Nonmanufacturing	137.3	139.0	139.9	140.5	141.9	143.4	144.7	146.6	148.0	1.0	4.3
Private industry workers	137.5	139.0	139.8	140.4	142.0	143.3	144.6	146.8	148.5	1.2	4.6
Excluding sales occupations	137.5	138.8	139.4	140.5	141.9	143.2	144.5	146.5	148.2	1.2	4.4
Workers, by occupational group:											
White-collar workers	139.4	141.1	142.0	142.4	144.1	145.6	146.9	149.3	151.1	1.2	4.9
Excluding sales occupations	139.9	141.3	141.9	143.0	144.5	146.0	147.3	149.4	151.3	1.3	4.7
Professional specialty and technical occupations	140.1	141.6	142.6	142.9	144.1	145.2	146.7	148.4	150.7	1.5	4.6
Executive, adminitrative, and managerial occupations	140.0	141.9	141.8	143.7	145.8	147.7	149.1	151.1	152.7	1.1	4.7
Sales occupations	137.3	140.4	142.6	139.6	142.6	144.1	145.3	148.9	150.3	.9	5.4
Administrative support occupations, including clerical	139.6	140.6	141.4	142.6	143.7	145.0	146.2	149.0	150.6	1.1	4.8
Blue-collar workers	134.3	135.2	135.9	136.9	138.2	139.4	140.5	142.6	144.1	1.1	4.3
Precision production, craft, and repair occupations	134.4	135.4	136.1	137.2	138.4	139.6	140.6	142.3	144.1	1.3	4.1
Machine operators, assemblers, and inspectors	134.7	135.7	136.8	137.3	138.4	139.9	141.4	144.0	145.0	.7	4.8
Transportation and material moving occupations	129.9	130.7	130.7	131.6	133.6	134.4	135.2	137.5	138.6	.8	3.7
Handlers, equipment cleaners, helpers, and laborers	137.6	138.5	139.2	141.0	142.3	143.2	144.4	146.4	148.1	1.2	4.1
Service occupations	136.0	137.3	138.0	139.5	140.6	141.0	142.6	143.9	145.4	1.0	3.4
Production and nonsupervisory occupations[4]	136.6	138.0	139.0	139.3	140.8	141.9	143.1	145.3	146.9	1.1	4.3
Workers, by industry division:											
Goods-producing	136.2	137.1	137.8	138.9	139.9	141.1	142.5	144.8	146.6	1.2	4.8
Excluding sales occupations	135.6	136.5	137.2	138.3	139.3	140.5	141.8	144.2	145.9	1.2	4.7
White-collar occupations	138.8	139.7	140.2	141.7	142.7	143.9	145.5	148.1	150.1	1.4	5.2
Excluding sales occupations	137.4	138.3	138.8	140.4	141.3	142.5	143.9	146.5	148.4	1.3	5.0
Blue-collar occupations	134.6	135.5	136.3	137.1	138.3	139.4	140.7	142.8	144.4	1.1	4.4
Construction	132.7	133.4	134.3	135.6	136.9	137.9	138.7	140.8	143.2	1.7	4.6
Manufacturing	137.2	138.2	138.9	139.9	140.9	142.1	143.6	146.0	147.5	1.0	4.7
White-collar occupations	139.1	140.1	140.5	141.8	143.0	144.3	145.8	148.2	150.2	1.3	5.0
Excluding sales occupations	137.3	138.3	138.7	140.1	141.3	142.5	143.8	146.2	148.2	1.4	4.9
Blue-collar occupations	135.9	136.8	137.7	138.5	139.4	140.5	142.1	144.4	145.6	.8	4.4
Durables	137.4	138.5	139.2	139.9	141.0	142.3	144.0	146.5	148.3	1.2	5.2
Nondurables	136.7	137.6	138.2	139.6	140.4	141.5	142.8	144.9	146.0	.8	4.0
Service-producing	137.8	139.6	140.5	140.9	142.8	144.1	145.3	147.4	149.1	1.2	4.4
Excluding sales occupations	138.5	140.0	140.6	141.7	143.3	144.6	145.9	147.7	149.4	1.2	4.3
White-collar occupations	139.3	141.2	142.2	142.3	144.3	145.8	147.0	149.3	151.0	1.1	4.6
Excluding sales occupations	140.6	142.2	142.8	143.8	145.5	147.0	148.3	150.3	152.1	1.2	4.5
Blue-collar occupations	133.2	134.3	134.8	136.2	137.8	139.1	139.8	141.8	143.1	.9	3.8
Service occupations	135.8	137.0	137.8	139.3	140.5	140.8	142.4	143.6	145.1	1.0	3.3
Transportation and public utilities	137.1	138.5	139.3	139.7	140.9	141.8	142.3	143.9	145.7	1.3	3.4
Transportation	134.9	136.7	137.3	136.8	138.1	138.7	139.5	140.4	141.8	1.0	2.7
Public utilities	139.7	140.7	141.9	143.4	144.6	145.7	146.1	148.6	150.9	1.5	4.4
Communications	139.2	140.5	141.7	143.3	144.9	146.1	146.0	148.4	150.9	1.7	4.1
Electric, gas, and sanitary services	140.3	141.0	142.1	143.4	144.2	145.1	146.1	148.9	151.0	1.4	4.7
Wholesale and retail trade	135.8	137.6	138.2	138.9	141.1	142.2	143.5	145.6	147.3	1.2	4.4
Excluding sales occupations	136.3	138.1	138.8	139.9	141.9	142.8	144.3	146.4	148.1	1.2	4.4
Wholesale trade	138.6	140.8	142.8	142.7	144.6	146.3	148.5	150.0	151.8	1.2	5.0
Excluding sales occupations	138.2	140.0	141.2	142.4	144.0	145.8	147.4	149.6	151.1	1.0	4.9
Retail trade	134.4	135.9	135.6	136.8	139.1	140.0	140.7	143.2	144.8	1.1	4.1
General merchandise stores	133.0	133.2	134.0	135.0	135.6	137.2	138.3	139.7	141.0	.9	4.0
Food stores	132.9	133.7	132.7	134.3	135.7	137.0	138.1	140.1	142.5	1.7	5.0

See footnotes at end of table.

21. Continued—Employment Cost Index, compensation,[1] by occupation and industry group

[June 1989 = 100]

Series	1998			1999				2000		Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended	12 months ended
										June 2000	
Finance, insurance, and real estate	138.4	141.0	142.5	141.5	145.8	147.6	148.3	152.0	153.1	0.7	5.0
Excluding sales occupations	141.3	143.2	143.3	145.6	148.8	151.0	151.6	154.2	155.5	.8	4.5
Banking, savings and loan, and other credit agencies	145.3	148.4	146.7	148.8	155.4	159.3	159.8	162.7	164.2	.9	5.7
Insurance	138.9	141.9	141.7	141.7	144.0	144.5	145.8	149.9	151.3	.9	5.1
Services	140.3	141.8	142.7	143.5	144.6	146.1	147.6	149.4	151.2	1.2	4.6
Business services	140.7	143.5	145.9	147.5	148.7	150.7	151.9	154.2	156.3	1.4	5.1
Health services	138.7	139.0	139.0	140.5	141.4	142.6	144.2	145.8	147.5	1.2	4.3
Hospitals	138.2	139.1	139.9	141.2	142.1	143.0	144.6	145.8	147.5	1.2	3.8
Educational services	143.9	147.0	147.7	148.3	148.7	152.2	153.0	154.0	154.9	.6	4.2
Colleges and universities	144.8	147.8	148.5	149.2	149.6	152.6	153.3	154.6	155.5	.6	3.9
Nonmanufacturing	137.2	138.9	139.7	140.3	142.0	143.4	144.5	146.7	148.4	1.2	4.5
White-collar workers	139.2	141.1	142.0	142.3	144.1	145.6	146.9	149.2	151.0	1.2	4.8
Excluding sales occupations	140.5	142.0	142.7	143.7	145.3	146.8	148.1	150.2	152.0	1.2	4.6
Blue-collar occupations	132.4	133.4	134.0	135.2	136.8	138.0	138.7	140.6	142.3	1.2	4.0
Service occupations	135.7	136.9	137.7	139.2	140.4	140.7	142.3	143.5	145.1	1.1	3.3
State and local government workers	136.9	139.0	139.8	140.5	141.0	143.1	144.6	145.5	145.9	.3	3.5
Workers, by occupational group:											
White-collar workers	136.2	138.4	139.3	139.8	140.2	142.6	144.0	144.9	145.3	.3	3.6
Professional specialty and technical	135.6	137.7	138.5	138.8	139.3	142.0	143.2	144.1	144.5	.3	3.7
Executive, administrative, and managerial	137.9	140.4	141.6	142.6	142.8	144.5	146.1	147.0	147.2	.1	3.1
Administrative support, including clerical	137.2	139.5	140.3	141.4	141.3	143.0	145.0	145.9	146.5	.4	3.7
Blue-collar workers	135.2	136.8	137.8	138.8	139.5	140.9	142.5	143.7	144.2	.3	3.4
Workers, by industry division:											
Services	136.6	139.0	139.7	140.0	140.5	143.2	144.5	145.2	145.5	.2	3.6
Services excluding schools[5]	136.2	138.7	138.8	139.6	140.3	142.6	143.8	145.2	145.8	.4	3.9
Health services	138.0	140.3	140.7	141.2	142.0	144.2	145.8	147.3	147.9	.4	4.2
Hospitals	138.4	140.7	141.2	141.7	142.7	144.8	146.3	147.9	148.4	.3	4.0
Educational services	136.5	138.8	139.6	139.9	140.3	143.1	144.4	145.0	145.2	.1	3.5
Schools	136.7	139.1	139.9	140.2	140.6	143.5	144.7	145.3	145.5	.1	3.5
Elementary and secondary	136.2	138.8	139.3	139.6	140.0	142.9	144.1	144.5	144.7	.1	3.4
Colleges and universities	138.1	140.4	141.5	141.7	142.1	144.8	146.5	147.4	147.6	.1	3.9
Public administration[3]	137.4	138.9	139.9	140.8	141.5	142.4	144.4	145.7	146.1	.3	3.3

[1] Cost (cents per hour worked) measured in the Employment Cost Index consists of wages, salaries, and employer cost of employee benefits.

[2] Consists of private industry workers (excluding farm and household workers) and State and local government (excluding Federal Government) workers.

[3] Consists of legislative, judicial, administrative, and regulatory activities.

[4] This series has the same industry and occupational coverage as the Hourly Earnings index, which was discontinued in January 1989.

[5] Includes, for example, library, social, and health services.

22. Employment Cost Index, wages and salaries, by occupation and industry group

[June 1989 = 100]

Series	1998			1999				2000		Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended	12 months ended
										June 2000	
Civilian workers[1]	135.0	136.8	137.7	138.4	139.8	141.3	142.5	144.0	145.4	1.0	4.0
Workers, by occupational group:											
White-collar workers	136.7	138.8	139.7	140.1	141.6	143.3	144.6	146.2	147.6	1.0	4.2
Professional specialty and technical	136.6	138.5	139.4	140.1	141.0	142.6	144.0	144.9	146.4	1.0	3.8
Executive, administrative, and managerial	138.3	140.5	140.3	141.6	143.8	145.9	147.2	148.6	149.9	.9	4.2
Administrative support, including clerical	136.2	137.5	138.6	140.0	140.9	142.3	143.5	145.5	146.9	1.0	4.3
Blue-collar workers	131.4	132.6	133.3	134.5	135.8	137.0	137.9	139.2	140.6	1.0	3.5
Service occupations	134.5	136.1	137.0	138.3	139.4	140.1	141.7	143.0	144.0	.7	3.3
Workers, by industry division:											
Goods-producing	133.3	134.4	135.2	136.3	137.4	138.6	139.7	141.3	143.0	1.2	4.1
Manufacturing	134.6	136.0	136.8	137.9	139.0	140.2	141.5	142.9	144.4	1.0	3.9
Service-producing	135.7	137.8	138.7	139.2	140.7	142.3	143.5	145.0	146.3	.9	4.0
Services	137.6	139.6	140.5	141.5	142.3	144.1	145.5	146.6	147.9	.9	3.9
Health services	136.5	137.6	137.6	138.8	139.7	140.9	142.5	143.8	145.3	1.0	4.0
Hospitals	135.1	136.4	137.1	138.1	138.8	140.1	141.6	142.6	143.8	.8	3.6
Educational services	136.5	139.1	140.0	140.2	140.6	143.7	144.7	145.3	145.6	.2	3.6
Public administration[2]	133.2	134.8	135.9	136.9	137.8	139.5	141.5	142.5	142.9	.3	3.7
Nonmanufacturing	135.1	137.0	137.8	138.4	139.9	141.5	142.6	144.2	145.5	.9	4.0
Private industry workers	134.9	136.6	137.4	138.1	139.7	141.0	142.2	143.9	145.4	1.0	4.1
Excluding sales occupations	134.8	136.3	136.9	138.2	139.6	140.8	142.0	143.5	145.1	1.1	3.9
Workers, by occupational group:											
White-collar workers	137.0	139.0	139.9	140.3	142.1	143.5	144.8	146.6	148.3	1.2	4.4
Excluding sales occupations	137.5	139.1	139.7	141.0	142.5	143.9	145.2	146.7	148.5	1.2	4.2
Professional specialty and technical occupations	137.1	138.7	139.7	140.7	141.8	142.6	144.1	145.1	147.3	1.5	3.9
Executive, administrative, and managerial occupations	138.7	140.9	140.5	141.9	144.3	146.4	147.6	149.2	150.7	1.0	4.4
Sales occupations	135.2	138.8	141.3	137.3	140.5	142.1	143.3	146.7	147.9	.8	5.3
Administrative support occupations, including clerical	136.7	137.9	138.9	140.4	141.4	142.7	143.8	146.0	147.5	1.0	4.3
Blue-collar workers	131.3	132.4	133.2	134.3	135.6	136.8	137.7	139.1	140.5	1.0	3.6
Precision production, craft, and repair occupations	131.2	132.3	133.0	134.3	135.6	136.7	137.5	138.9	140.6	1.2	3.7
Machine operators, assemblers, and inspectors	132.7	133.8	134.9	135.7	136.7	138.3	139.5	140.7	141.6	.6	3.6
Transportation and material moving occupations	126.4	127.6	127.8	129.1	131.0	131.9	132.7	134.1	135.2	.8	3.2
Handlers, equipment cleaners, helpers, and laborers	133.7	135.1	135.8	137.3	138.3	139.4	140.4	141.8	143.6	1.3	3.8
Service occupations	133.0	134.4	135.3	136.7	137.8	138.0	139.6	141.0	142.5	1.1	3.4
Production and nonsupervisory occupations[3]	133.6	135.2	136.4	136.8	138.2	139.3	140.4	142.1	143.7	1.1	4.0
Workers, by industry division:											
Goods-producing	133.2	134.3	135.2	136.3	137.3	138.5	139.7	141.3	143.0	1.2	4.2
Excluding sales occupations	132.5	133.6	134.4	135.5	136.6	137.8	138.9	140.5	142.1	1.1	4.0
White-collar occupations	136.3	137.4	138.2	139.4	140.5	141.7	143.0	145.0	146.8	1.2	4.5
Excluding sales occupations	134.6	135.7	136.4	137.8	138.8	140.1	141.3	143.2	144.9	1.2	4.4
Blue-collar occupations	131.3	132.3	133.3	134.3	135.4	136.6	137.6	139.0	140.5	1.1	3.8
Construction	128.1	128.5	129.3	130.7	131.9	133.0	133.6	136.0	138.0	1.5	4.6
Manufacturing	134.6	136.0	136.8	137.9	139.0	140.2	141.5	142.9	144.4	1.0	3.9
White-collar occupations	136.8	138.3	139.0	140.1	141.4	142.7	144.0	145.8	147.7	1.3	4.5
Excluding sales occupations	135.0	136.3	137.1	138.3	139.6	140.8	142.0	143.7	145.6	1.3	4.3
Blue-collar occupations	133.1	134.3	135.3	136.3	137.2	138.4	139.7	140.8	142.0	.9	3.5
Durables	134.5	135.9	136.9	137.9	139.1	140.4	141.8	143.0	144.7	1.2	4.0
Nondurables	134.9	136.0	136.8	138.0	138.7	139.7	140.9	142.7	143.9	.8	3.7
Service-producing	135.6	137.6	138.4	138.9	140.8	142.1	143.3	145.0	146.5	1.0	4.0
Excluding sales occupations	136.2	137.9	138.5	139.8	141.4	142.6	143.8	145.3	146.9	1.1	3.9
White-collar occupations	137.0	139.2	140.1	140.3	142.3	143.8	145.0	146.9	148.5	1.1	4.4
Excluding sales occupations	138.4	140.2	140.7	142.0	143.7	145.1	146.4	147.8	149.6	1.2	4.1
Blue-collar occupations	131.1	132.4	132.9	134.4	135.9	137.0	137.8	139.1	140.3	.9	3.2
Service occupations	133.0	134.2	135.2	136.7	137.8	138.0	139.6	141.1	142.5	1.0	3.4
Transportation and public utilities	132.8	134.3	135.1	135.4	136.8	137.5	137.9	138.5	140.0	1.1	2.3
Transportation	130.4	132.4	132.9	132.3	133.7	134.4	134.9	134.9	136.2	1.0	1.9
Public utilities	135.7	136.5	137.8	139.2	140.6	141.5	141.8	143.2	144.9	1.2	3.1
Communications	135.8	136.7	138.0	139.4	141.1	141.9	142.2	143.4	145.0	1.1	2.8
Electric, gas, and sanitary services	135.6	136.3	137.4	138.9	140.0	140.9	141.3	143.0	144.7	1.2	3.4
Wholesale and retail trade	134.6	136.6	137.0	137.7	139.6	140.7	142.0	143.8	145.5	1.2	4.2
Excluding sales occupations	135.6	137.6	138.2	139.5	141.1	141.8	143.3	145.2	146.8	1.1	4.0
Wholesale trade	137.1	139.3	141.3	140.7	142.3	144.3	146.5	147.4	149.4	1.4	5.0
Excluding sales occupations	137.8	139.6	140.8	141.9	143.0	144.8	146.4	147.9	149.7	1.2	4.7
Retail trade	133.3	135.2	134.8	136.2	138.3	138.9	139.6	142.1	143.5	1.0	3.8
General merchandise stores	131.5	132.2	133.0	133.7	134.3	135.6	136.7	137.8	138.5	.5	3.1
Food stores	130.5	131.7	130.5	131.8	132.8	133.9	134.9	136.7	139.5	2.0	5.0

See footnotes at end of table.

22. Continued—Employment Cost Index, wages and salaries, by occupation and industry group

[June 1989 = 100]

Series	1998			1999				2000		Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended	12 months ended
										June 2000	
Finance, insurance, and real estate	134.8	138.1	139.8	137.2	142.4	144.5	145.2	148.7	149.5	0.5	5.0
Excluding sales occupations	137.5	139.7	139.6	141.0	144.8	147.5	148.0	150.2	151.5	.9	4.6
Banking, savings and loan, and other credit agencies	143.2	147.0	144.4	146.1	154.5	159.2	159.6	162.0	163.3	.8	5.7
Insurance	134.8	138.7	138.5	137.4	139.8	140.2	141.5	145.5	146.6	.8	4.9
Services	138.3	140.0	140.8	142.2	143.2	144.5	146.0	147.4	149.1	1.2	4.1
Business services	139.2	141.8	144.1	145.4	146.3	148.5	149.8	152.0	154.1	1.4	5.3
Health services	136.5	137.5	137.4	138.7	139.6	140.6	142.2	143.5	145.3	1.3	4.1
Hospitals	134.7	135.8	136.5	137.6	138.3	139.3	140.9	141.8	143.3	1.1	3.6
Educational services	139.6	142.8	143.5	143.9	144.2	147.5	148.2	148.9	149.6	.5	3.7
Colleges and universities	139.7	142.8	143.6	144.1	144.4	147.2	147.9	148.9	149.4	.3	3.5
Nonmanufacturing	134.7	136.5	137.4	137.9	139.7	141.0	142.1	143.9	145.5	1.1	4.2
White-collar workers	136.8	138.9	139.8	140.1	142.0	143.5	144.7	146.5	148.2	1.2	4.4
Excluding sales occupations	138.1	139.8	140.3	141.6	143.2	144.6	145.9	147.4	149.1	1.2	4.1
Blue-collar occupations	129.5	130.5	131.1	132.4	134.0	135.1	135.8	137.4	138.9	1.1	3.7
Service occupations	132.9	134.1	135.1	136.5	137.7	137.9	139.5	140.9	142.4	1.1	3.4
State and local government workers	135.4	137.6	138.5	139.0	139.6	142.2	143.5	144.3	144.7	.3	3.7
Workers, by occupational group:											
White-collar workers	135.2	137.6	138.5	138.9	139.3	142.1	143.4	144.1	144.5	.3	3.7
Professional specialty and technical	135.6	137.9	138.7	138.9	139.4	142.5	143.6	144.3	144.7	.3	3.8
Executive, administrative, and managerial	135.6	138.0	139.3	140.1	140.5	142.7	144.3	144.9	145.1	.1	3.3
Administrative support, including clerical	133.3	135.4	136.5	137.4	137.5	139.6	141.7	142.4	143.0	.4	4.0
Blue-collar workers	133.5	135.1	136.0	136.9	137.6	139.4	140.7	141.5	142.1	.4	3.3
Workers, by industry division:											
Services	135.9	138.4	139.2	139.5	139.9	142.9	144.0	144.6	144.9	.2	3.6
Services excluding schools[4]	135.5	137.8	138.2	139.0	139.6	142.1	143.2	144.3	144.8	.3	3.7
Health services	136.5	138.7	139.2	139.7	140.4	142.8	144.2	145.3	145.7	.3	3.8
Hospitals	136.5	138.6	139.1	139.7	140.6	142.8	144.1	145.3	145.6	.2	3.6
Educational services	135.8	138.4	139.3	139.5	139.8	142.9	144.0	144.5	144.8	.2	3.6
Schools	136.0	138.5	139.5	139.6	140.0	143.1	144.2	144.7	144.9	.1	3.5
Elementary and secondary	136.1	138.7	139.3	139.5	139.9	143.1	144.1	144.5	144.6	.1	3.4
Colleges and universities	135.5	137.7	139.6	139.6	139.8	142.6	144.4	144.9	145.6	.5	4.1
Public administration[2]	133.2	134.8	135.9	136.9	137.8	139.5	141.5	142.5	142.9	.3	3.7

[1] Consists of private industry workers (excluding farm and household workers) and State and local government (excluding Federal Government) workers.

[2] Consists of legislative, judicial, administrative, and regulatory activities.

[3] This series has the same industry and occupational coverage as the Hourly Earnings index, which was discontinued in January 1989.

[4] Includes, for example, library, social, and health services.

23. Employment Cost Index, benefits, private industry workers by occupation and industry group

[June 1989 = 100]

Series	1998			1999				2000		Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June.	3 months ended	12 months ended
										June 2000	
Private industry workers	143.7	144.5	145.2	145.8	147.3	148.6	150.2	153.8	155.7	1.2	5.7
Workers, by occupational group:											
White-collar workers	145.6	146.6	147.4	147.9	149.4	151.0	152.5	156.3	158.5	1.4	6.1
Blue-collar workers	140.4	141.0	141.6	142.2	143.6	144.8	146.2	150.0	151.6	1.1	5.6
Workers, by industry division:											
Goods-producing	142.5	143.0	143.2	144.3	145.2	146.3	148.2	152.3	154.2	1.2	6.2
Service-producing	143.8	144.9	145.7	146.1	147.9	149.4	150.7	154.0	156.0	1.3	5.5
Manufacturing	142.4	142.6	142.7	143.6	144.5	145.7	147.8	152.3	153.9	1.1	6.5
Nonmanufacturing	143.9	145.0	145.8	146.3	148.0	149.4	150.7	154.0	156.1	1.4	5.5

24. Employment Cost Index, private nonfarm workers by bargaining status, region, and area size

[June 1989 = 100]

Series	1998			1999				2000		Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended	12 months ended
										June 2000	
COMPENSATION											
Workers, by bargaining status[1]											
Union	135.3	136.8	137.5	138.0	139.0	140.2	141.2	143.0	144.4	1.0	3.9
Goods-producing	134.3	135.6	136.5	136.8	138.2	139.2	140.8	143.3	144.8	1.0	4.8
Service-producing	136.2	138.0	138.5	139.2	139.7	141.0	141.4	142.5	143.9	1.0	3.0
Manufacturing	134.6	136.0	136.9	137.0	138.1	139.1	141.0	144.5	145.4	.6	5.3
Nonmanufacturing	135.3	136.9	137.4	138.1	139.2	140.3	140.8	141.7	143.4	1.2	3.0
Nonunion	137.8	139.3	140.1	140.8	142.5	143.8	145.2	147.4	149.1	1.2	4.6
Goods-producing	136.9	137.7	138.3	139.7	140.5	141.8	143.1	145.4	147.2	1.2	4.8
Service-producing	138.0	139.7	140.6	141.1	143.0	144.4	145.7	148.0	149.6	1.1	4.6
Manufacturing	138.0	138.9	139.4	140.7	141.7	143.0	144.4	146.5	148.2	1.2	4.6
Nonmanufacturing	137.5	139.1	140.0	140.6	142.4	143.8	145.1	147.4	149.1	1.2	4.7
Workers, by region[1]											
Northeast	137.0	138.7	139.5	140.5	141.5	143.2	144.3	146.3	147.6	.9	4.3
South	136.4	137.6	138.1	139.1	140.7	141.8	143.0	145.0	146.7	1.2	4.3
Midwest (formerly North Central)	139.6	140.9	141.4	141.7	143.6	145.0	146.3	148.9	150.7	1.2	4.9
West	136.6	138.5	140.0	140.3	142.1	143.3	144.7	147.0	148.8	1.2	4.7
Workers, by area size[1]											
Metropolitan areas	137.5	139.1	139.8	140.4	142.0	143.3	144.7	146.9	148.6	1.2	4.6
Other areas	137.1	138.2	139.4	140.5	141.8	143.1	143.6	146.0	147.7	1.2	4.2
WAGES AND SALARIES											
Workers, by bargaining status[1]											
Union	130.7	132.4	133.1	133.6	134.7	135.7	136.5	137.2	138.5	.9	2.8
Goods-producing	129.4	131.0	131.7	132.3	133.8	134.9	136.1	137.2	138.4	.9	3.4
Service-producing	132.2	134.1	134.8	135.4	135.8	136.8	137.2	137.6	138.9	.9	2.3
Manufacturing	130.4	132.2	133.0	133.6	134.7	135.8	137.5	138.8	139.7	.6	3.7
Nonmanufacturing	130.8	132.4	133.1	133.7	134.6	135.6	135.9	136.4	137.8	1.0	2.4
Nonunion	135.7	137.4	138.3	139.0	140.7	142.0	143.3	145.1	146.7	1.1	4.3
Goods-producing	134.7	135.7	136.5	137.8	138.8	140.0	141.1	142.9	144.7	1.3	4.3
Service-producing	135.9	137.9	138.8	139.3	141.3	142.6	143.9	145.8	147.3	1.0	4.2
Manufacturing	136.2	137.3	138.2	139.4	140.5	141.7	142.9	144.4	146.1	1.2	4.0
Nonmanufacturing	135.3	137.1	138.0	138.6	140.5	141.8	143.0	145.0	146.6	1.1	4.3
Workers, by region[1]											
Northeast	133.8	135.4	136.4	137.1	138.2	139.9	140.9	142.3	143.7	1.0	4.0
South	134.9	136.5	136.7	137.9	139.4	140.2	141.5	143.0	144.6	1.1	3.7
Midwest (formerly North Central)	136.0	137.5	138.0	138.9	141.0	142.4	143.6	145.3	147.1	1.2	4.3
West	134.5	136.7	138.4	138.2	140.2	141.3	142.6	144.7	146.3	1.1	4.4
Workers, by area size[1]											
Metropolitan areas	135.1	136.9	137.7	138.3	139.9	141.2	142.5	144.1	145.7	1.1	4.1
Other areas	133.4	134.7	136.0	137.1	138.4	139.8	140.2	142.2	143.7	1.1	3.8

[1] The indexes are calculated differently from those for the occupation and industry groups. For a detailed description of the index calculation, see the *Monthly Labor Review* Technical Note, "Estimation procedures for the Employment Cost Index," May 1982.

25. Percent of full-time employees participating in employer-provided benefit plans, and in selected features within plans, medium and large private establishments, selected years, 1980–97

Item	1980	1982	1984	1986	1988	1989	1991	1993	1995	1997
Scope of survey (in 000's)	21,352	21,043	21,013	21,303	31,059	32,428	31,163	28,728	33,374	38,409
Number of employees (in 000's):										
With medical care	20,711	20,412	20,383	20,238	27,953	29,834	25,865	23,519	25,546	29,340
With life insurance	20,498	20,201	20,172	20,451	28,574	30,482	29,293	26,175	29,078	33,495
With defined benefit plan	17,936	17,676	17,231	16,190	19,567	20,430	18,386	16,015	17,417	19,202
Time-off plans										
Participants with:										
Paid lunch time	10	9	9	10	11	10	8	9	–	–
Average minutes per day	–	25	26	27	29	26	30	29	–	–
Paid rest time	75	76	73	72	72	71	67	68	–	–
Average minutes per day	–	25	26	26	26	26	28	26	–	–
Paid funeral leave	–	–	–	88	85	84	80	83	80	81
Average days per occurrence	–	–	–	3.2	3.2	3.3	3.3	3.0	3.3	3.7
Paid holidays	99	99	99	99	96	97	92	91	89	89
Average days per year	10.1	10.0	9.8	10.0	9.4	9.2	10.2	9.4	9.1	9.3
Paid personal leave	20	24	23	25	24	22	21	21	22	20
Average days per year	–	3.8	3.6	3.7	3.3	3.1	3.3	3.1	3.3	3.5
Paid vacations	100	99	99	100	98	97	96	97	96	95
Paid sick leave [1]	62	67	67	70	69	68	67	65	58	56
Unpaid maternity leave	–	–	–	–	33	37	37	60	–	–
Unpaid paternity leave	–	–	–	–	16	18	26	53	–	–
Unpaid family leave	–	–	–	–	–	–	–	–	84	93
Insurance plans										
Participants in medical care plans	97	97	97	95	90	92	83	82	77	76
Percent of participants with coverage for:										
Home health care	–	–	46	66	76	75	81	86	78	85
Extended care facilities	58	62	62	70	79	80	80	82	73	78
Physical exam	–	–	8	18	28	28	30	42	56	63
Percent of participants with employee contribution required for:										
Self coverage	26	27	36	43	44	47	51	61	67	69
Average monthly contribution	–	–	$11.93	$12.80	$19.29	$25.31	$26.60	$31.55	$33.92	$39.14
Family coverage	46	51	58	63	64	66	69	76	78	80
Average monthly contribution	–	–	$35.93	$41.40	$60.07	$72.10	$96.97	$107.42	$118.33	$130.07
Participants in life insurance plans	96	96	96	96	92	94	94	91	87	87
Percent of participants with:										
Accidental death and dismemberment insurance	69	72	74	72	78	71	71	76	77	74
Survivor income benefits	–	–	–	10	8	7	6	5	7	6
Retiree protection available	–	64	64	59	49	42	44	41	37	33
Participants in long-term disability insurance plans	40	43	47	48	42	45	40	41	42	43
Participants in sickness and accident insurance plans	54	51	51	49	46	43	45	44	–	–
Participants in short-term disability plans [1]	–	–	–	–	–	–	–	–	53	55
Retirement plans										
Participants in defined benefit pension plans	84	84	82	78	63	63	59	56	52	50
Percent of participants with:										
Normal retirement prior to age 65	55	58	63	64	59	62	55	52	52	52
Early retirement available	98	97	97	98	98	97	98	95	96	95
Ad hoc pension increase in last 5 years	–	–	47	35	26	22	7	6	4	10
Terminal earnings formula	53	52	54	57	55	64	56	61	58	56
Benefit coordinated with Social Security	45	45	56	62	62	63	54	48	51	49
Participants in defined contribution plans	–	–	–	60	45	48	48	49	55	57
Participants in plans with tax-deferred savings arrangements	–	–	–	33	36	41	44	43	54	55
Other benefits										
Employees eligible for:										
Flexible benefits plans	–	–	–	2	5	9	10	12	12	13
Reimbursement accounts [2]	–	–	–	5	12	23	36	52	38	32
Premium conversion plans	–	–	–	–	–	–	–	–	5	7

[1] The definitions for paid sick leave and short-term disability (previously sickness and accident insurance) were changed for the 1995 survey. Paid sick leave now includes only plans that specify either a maximum number of days per year or unlimited days. Short-terms disability now includes all insured, self-insured, and State-mandated plans available on a per-disability basis, as well as the unfunded per-disability plans previously reported as sick leave. Sickness and accident insurance, reported in years prior to this survey, included only insured, self-insured, and State-mandated plans providing per-disability benefits at less than full pay.

[2] Prior to 1995, reimbursement accounts included premium conversion plans, which specifically allow medical plan participants to pay required plan premiums with pretax dollars. Also, reimbursement accounts that were part of flexible benefit plans were tabulated separately.

NOTE: Dash indicates data not available.

26. Percent of full-time employees participating in employer-provided benefit plans, and in selected features within plans, small private establishments and State and local governments, 1987, 1990, 1992, 1994, and 1996

Item	Small private establishments				State and local governments			
	1990	1992	1994	1996	1987	1990	1992	1994
Scope of survey (in 000's)	32,466	34,360	35,910	39,816	10,321	12,972	12,466	12,907
Number of employees (in 000's):								
With medical care	22,402	24,396	23,536	25,599	9,599	12,064	11,219	11,192
With life insurance	20,778	21,990	21,955	24,635	8,773	11,415	11,095	11,194
With defined benefit plan	6,493	7,559	5,480	5,883	9,599	11,675	10,845	11,708
Time-off plans								
Participants with:								
Paid lunch time	8	9	–	–	17	11	10	–
Average minutes per day	37	37	–	–	34	36	34	–
Paid rest time	48	49	–	–	58	56	53	–
Average minutes per day	27	26	–	–	29	29	29	–
Paid funeral leave	47	50	50	51	56	63	65	62
Average days per occurrence	2.9	3.0	3.1	3.0	3.7	3.7	3.7	3.7
Paid holidays	84	82	82	80	81	74	75	73
Average days per year[1]	9.5	9.2	7.5	7.6	10.9	13.6	14.2	11.5
Paid personal leave	11	12	13	14	38	39	38	38
Average days per year	2.8	2.6	2.6	3.0	2.7	2.9	2.9	3.0
Paid vacations	88	88	88	86	72	67	67	66
Paid sick leave [2]	47	53	50	50	97	95	95	94
Unpaid leave	17	18	–	–	57	51	59	–
Unpaid paternity leave	8	7	–	–	30	33	44	–
Unpaid family leave	–	–	47	48	–	–	–	93
Insurance plans								
Participants in medical care plans	69	71	66	64	93	93	90	87
Percent of participants with coverage for:								
Home health care	79	80	–	–	76	82	87	84
Extended care facilities	83	84	–	–	78	79	84	81
Physical exam	26	28	–	–	36	36	47	55
Percent of participants with employee contribution required for:								
Self coverage	42	47	52	52	35	38	43	47
Average monthly contribution	$25.13	$36.51	$40.97	$42.63	$15.74	$25.53	$28.97	$30.20
Family coverage	67	73	76	75	71	65	72	71
Average monthly contribution	$109.34	$150.54	$159.63	$181.53	$71.89	$117.59	$139.23	$149.70
Participants in life insurance plans	64	64	61	62	85	88	89	87
Percent of participants with:								
Accidental death and dismemberment insurance	78	76	79	77	67	67	74	64
Survivor income benefits	1	1	2	1	1	1	1	2
Retiree protection available	19	25	20	13	55	45	46	46
Participants in long-term disability insurance plans	19	23	20	22	31	27	28	30
Participants in sickness and accident insurance plans	6	26	26	–	14	21	22	21
Participants in short-term disability plans [2]	–	–	–	29	–	–	–	–
Retirement plans								
Participants in defined benefit pension plans	20	22	15	15	93	90	87	91
Percent of participants with:								
Normal retirement prior to age 65	54	50	–	47	92	89	92	92
Early retirement available	95	95	–	92	90	88	89	87
Ad hoc pension increase in last 5 years	7	4	–	–	33	16	10	13
Terminal earnings formula	58	54	–	53	100	100	100	99
Benefit coordinated with Social Security	49	46	–	44	18	8	10	49
Participants in defined contribution plans	31	33	34	38	9	9	9	9
Participants in plans with tax-deferred savings arrangements	17	24	23	28	28	45	45	24
Other benefits								
Employees eligible for:								
Flexible benefits plans	1	2	3	4	5	5	5	5
Reimbursement accounts [3]	8	14	19	12	5	31	50	64
Premium conversion plans	–	–	–	7	–	–	–	–

[1] Methods used to calculate the average number of paid holidays were revised in 1994 to count partial days more precisely. Average holidays for 1994 are not comparable with those reported in 1990 and 1992.

[2] The definitions for paid sick leave and short-term disability (previously sickness and accident insurance) were changed for the 1996 survey. Paid sick leave now includes only plans that specify either a maximum number of days per year or unlimited days. Short-term disability now includes all insured, self-insured, and State-mandated plans available on a per-disability basis, as well as the unfunded per-disability plans previously reported as sick leave. Sickness and accident insurance, reported in years prior to this survey, included only insured, self-insured, and State-mandated plans providing per-disability benefits at less than full pay.

[3] Prior to 1996, reimbursement accounts included premium conversion plans, which specifically allow medical plan participants to pay required plan premiums with pretax dollars. Also, reimbursement accounts that were part of flexible benefit plans were tabulated separately.

NOTE: Dash indicates data not available.

27. Work stoppages involving 1,000 workers or more

Measure	Annual totals		1999									2000			
	1998	1999	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.[P]	Feb.[P]	Mar.[P]	Apr.[P]
Number of stoppages:															
Beginning in period	34	17	2	3	2	1	1	2	0	1	0	0	1	2	6
In effect during period	34	21	4	6	6	6	3	5	2	2	1	1	2	4	7
Workers involved:															
Beginning in period (in thousands)	387	73	19.0	9.6	2.2	1.7	11.0	19.1	.0	2.0	.0	.0	17.0	5.7	26.7
In effect during period (in thousands)	387	80	23.4	22.0	21.6	16.3	15.4	34.5	10.1	5.0	3.0	3.0	20.0	25.7	29.7
Days idle:															
Number (in thousands)	5,116	1,995	272.4	314.8	309.4	266.4	118.8	176.2	67.1	63.6	63.0	60.0	298.0	327.6	272.2
Percent of estimated working time[1]	.02	.01	.01	.01	.01	.01	([2])	.01	([2])	([2])	([2])	([2])	.01	.01	.01

[1] Agricultural and government employees are included in the total employed and total working time; private household, forestry, and fishery employees are excluded. An explanation of the measurement of idleness as a percentage of the total time worked is found in " 'Total economy' measures of strike idleness," *Monthly Labor Review*, October 1968, pp. 54–56.

[2] Less than 0.005.

[P] = preliminary.

28. Consumer Price Indexes for All Urban Consumers and for Urban Wage Earners and Clerical Workers: U.S. city average, by expenditure category and commodity or service group

[1982–84 = 100, unless otherwise indicated]

Series	Annual average		1999				2000								
	1998	1999	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept
CONSUMER PRICE INDEX FOR ALL URBAN CONSUMERS															
All items	163.0	166.6	167.9	168.2	168.3	168.3	168.7	169.7	171.1	171.2	171.3	172.3	172.6	172.8	173.7
All items (1967 = 100)	488.3	499.0	502.9	503.9	504.1	504.1	505.5	508.4	512.5	512.9	513.3	516.1	517.2	517.6	520.3
Food and beverages	161.1	164.6	165.1	165.5	165.7	165.9	166.6	166.8	167.1	167.2	167.8	167.9	168.7	169.2	169.4
Food	160.7	164.1	164.6	165.1	165.2	165.4	166.1	166.3	166.5	166.6	167.3	167.3	168.1	168.7	168.9
Food at home	161.1	164.2	164.5	165.1	165.1	165.4	166.3	166.3	166.4	166.5	167.5	167.3	168.3	168.9	169.0
Cereals and bakery products	181.1	185.0	185.2	185.2	184.8	185.9	185.6	186.0	186.1	187.2	188.6	187.7	189.6	189.9	188.6
Meats, poultry, fish, and eggs	147.3	147.9	149.2	149.2	150.5	149.8	150.2	151.3	152.4	152.9	153.9	154.9	155.8	156.8	156.9
Dairy and related products[1]	150.8	159.6	158.7	164.1	164.6	162.1	160.4	160.9	159.1	160.6	159.6	159.5	160.5	161.0	161.6
Fruits and vegetables	198.2	203.1	202.6	202.2	201.2	204.5	208.4	203.0	201.7	201.6	204.3	199.9	201.0	202.5	204.6
Nonalcoholic beverages and beverage materials	133.0	134.3	134.2	134.6	133.9	134.7	137.:	138.4	138.5	137.6	137.3	137.5	138.5	138.2	138.0
Other foods at home	150.8	153.5	153.9	153.7	153.0	153.3	154.3	154.4	155.1	154.0	155.4	156.2	156.6	156.9	156.7
Sugar and sweets	150.2	152.3	153.5	153.3	152.1	152.3	154.8	154.4	154.6	152.4	153.7	154.0	154.1	154.6	154.6
Fats and oils	146.9	148.3	148.5	149.0	145.3	145.1	147.0	145.6	145.9	144.8	147.0	146.6	148.1	148.9	148.7
Other foods	165.5	168.9	169.2	168.7	169.0	169.4	169.8	170.5	171.6	170.7	172.1	173.4	173.5	173.7	173.4
Other miscellaneous foods[1,2]	102.6	104.9	105.3	104.3	103.9	105.7	104.3	106.4	107.0	105.2	106.4	108.4	108.8	109.5	107.7
Food away from home[1]	161.1	165.1	165.8	166.2	166.5	166.8	167.2	167.6	167.9	168.1	168.3	168.6	169.1	169.5	170.0
Other food away from home[1,2]	101.6	105.2	106.4	106.8	106.9	106.9	107.5	107.9	107.9	108.0	108.1	108.1	108.7	109.3	110.0
Alcoholic beverages	165.7	169.7	170.7	170.5	171.2	171.8	172.4	173.0	173.5	173.6	173.8	174.4	175.2	175.6	175.5
Housing	160.4	163.9	165.2	165.0	164.9	164.8	165.8	166.9	167.6	167.6	167.8	169.4	170.4	170.7	171.4
Shelter	182.1	187.3	188.3	188.5	188.6	188.6	189.8	190.7	191.8	191.8	192.0	192.9	193.7	194.3	194.6
Rent of primary residence	172.1	177.5	178.4	178.8	179.8	180.3	180.8	181.2	181.7	181.9	182.3	182.8	183.5	184.2	185.3
Lodging away from home	109.0	112.3	113.8	113.1	108.5	105.8	111.3	115.1	120.9	119.4	117.5	120.5	122.8	123.0	118.1
Owners' equivalent rent of primary residence[3]	187.8	192.9	193.9	194.2	194.9	195.2	195.7	196.1	196.4	196.8	197.2	197.7	198.2	198.8	199.9
Tenants' and household insurance[1,2]	99.8	101.3	102.3	102.2	102.1	102.2	102.4	102.4	102.6	103.1	103.8	103.9	104.2	104.0	104.2
Fuels and utilities	128.5	128.8	132.7	130.3	130.0	129.6	129.9	132.9	131.8	131.7	132.4	138.9	141.3	140.9	143.8
Fuels	113.7	113.5	117.6	115.0	114.6	114.1	114.3	117.6	116.3	116.1	116.8	124.0	126.5	125.9	129.1
Fuel oil and other fuels	90.0	91.4	93.9	97.6	100.7	106.3	114.4	147.2	130.1	123.7	121.6	120.9	120.8	120.8	133.7
Gas (piped) and electricity	121.2	120.9	125.3	122.0	121.4	120.3	119.8	120.6	120.7	121.0	122.0	130.2	133.0	132.4	134.8
Household furnishings and operations	126.6	126.7	127.0	126.6	126.4	126.4	127.0	127.2	127.9	128.2	128.1	128.1	128.6	128.6	129.0
Apparel	133.0	131.3	131.8	134.6	133.6	130.1	126.8	129.2	132.5	133.3	132.2	128.3	124.5	125.3	130.4
Men's and boys' apparel	131.8	131.1	130.5	134.0	133.2	131.5	129.2	130.0	131.5	131.6	132.6	129.4	126.4	126.8	129.1
Women's and girls' apparel	126.0	123.3	125.4	128.4	126.6	121.8	116.0	120.0	125.9	126.7	124.4	119.2	113.9	115.6	124.2
Infants' and toddlers' apparel[1]	126.1	129.0	129.9	132.4	132.6	133.0	133.3	133.1	133.9	132.3	131.7	130.5	128.1	126.7	127.4
Footwear	128.0	125.7	124.7	126.1	126.4	123.7	121.6	122.1	124.7	126.7	126.1	123.9	120.3	120.7	124.9
Transportation	141.6	144.4	146.5	147.3	147.6	148.3	148.3	149.7	153.4	152.9	153.1	155.7	155.0	153.2	154.7
Private transportation	137.9	140.5	142.9	143.3	143.6	144.4	144.4	145.6	149.2	148.7	148.8	151.4	150.6	148.6	150.4
New and used motor vehicles[2]	100.1	100.1	100.1	100.5	100.9	101.1	100.8	100.3	100.4	100.8	101.0	100.8	100.6	100.4	100.4
New vehicles	143.4	142.9	141.6	142.3	143.1	143.6	143.3	143.0	143.3	143.5	143.3	142.9	142.5	141.9	141.4
Used cars and trucks[1]	150.6	152.0	155.7	156.4	156.1	155.0	153.9	153.0	153.0	154.0	155.4	155.7	155.3	155.2	156.2
Motor fuel	92.2	100.7	110.3	110.0	109.3	112.2	112.6	118.1	131.7	128.7	128.3	139.0	136.1	128.4	135.2
Gasoline (all types)	91.6	100.1	109.7	109.4	108.7	111.5	111.9	117.3	130.9	127.9	127.6	138.3	135.4	127.7	134.3
Motor vehicle parts and equipment	101.1	100.5	100.6	100.5	101.2	100.8	100.8	100.9	101.4	101.0	101.1	101.2	101.5	101.5	101.7
Motor vehicle maintenance and repair	167.1	171.9	172.8	173.2	173.6	173.8	174.6	175.2	175.7	175.9	176.3	176.8	177.2	178.2	178.7
Public transportation	190.3	197.7	194.7	201.5	202.2	201.2	199.5	204.2	209.8	209.2	210.4	212.6	213.7	215.7	213.0
Medical care	242.1	250.6	252.3	252.8	253.3	254.2	255.5	257.0	258.1	258.8	259.4	260.5	261.4	262.6	263.1
Medical care commodities	221.8	230.7	233.1	233.2	233.7	234.6	235.2	235.5	236.3	237.0	237.5	238.2	238.6	239.2	239.4
Medical care services	246.8	255.1	256.6	257.1	257.7	258.5	260.1	262.0	263.2	263.9	264.4	265.6	266.7	268.0	268.7
Professional services	222.2	229.2	230.4	230.9	231.4	231.7	233.1	234.9	236.1	236.6	237.1	237.9	238.3	238.9	239.3
Hospital and related services	287.5	299.5	302.1	302.9	303.9	306.3	308.4	310.5	311.5	312.7	313.5	315.6	318.1	321.3	322.5
Recreation[2]	101.1	102.1	101.7	101.8	101.9	102.0	102.3	102.5	102.9	102.9	103.1	103.4	103.7	103.9	103.8
Video and audio[1,2]	101.1	100.7	100.1	100.1	100.1	100.1	100.5	100.8	100.9	100.3	101.3	101.5	101.3	101.6	101.5
Education and communication[2]	100.3	101.2	101.9	102.1	102.2	102.3	102.7	102.2	102.0	101.8	101.8	101.5	102.0	102.8	102.9
Education[2]	102.1	107.0	109.4	109.6	109.3	109.3	110.2	110.6	110.6	110.7	110.9	111.5	111.8	113.0	114.9
Educational books and supplies	250.8	261.7	267.0	269.0	255.7	256.0	273.9	278.3	276.9	276.7	276.8	277.5	278.1	280.2	284.8
Tuition, other school fees, and child care	294.2	308.4	315.3	315.9	316.3	316.3	317.3	318.0	318.3	318.7	319.2	320.9	321.7	325.4	330.8
Communication[1,2]	98.7	96.0	95.3	95.3	95.9	95.9	96.0	94.7	94.3	93.8	93.7	92.6	93.3	93.7	92.1
Information and information processing[1,2]	98.5	95.5	94.7	94.7	95.3	95.4	95.5	94.1	93.6	93.1	93.0	91.8	92.5	93.0	91.3
Telephone services[1,2]	100.7	100.1	99.6	99.8	100.6	100.7	100.9	99.4	98.9	98.6	98.5	97.2	98.2	98.9	97.0
Information and information processing other than telephone services[1,4]	39.9	30.5	29.8	29.3	28.7	28.2	28.2	28.0	27.6	27.2	26.7	26.6	26.0	25.7	25.0
Personal computers and peripheral equipment[1,2]	78.2	53.5	50.9	49.7	48.2	47.0	47.2	46.4	45.1	44.2	42.7	42.4	41.2	40.3	38.9
Other goods and services	237.7	258.3	257.6	262.6	263.2	263.0	263.0	264.7	266.7	268.0	271.9	270.2	269.6	272.2	274.7
Tobacco and smoking products	274.8	355.8	350.1	373.8	373.3	369.8	369.1	375.1	383.0	387.3	404.4	393.5	388.5	400.7	408.0
Personal care[1]	156.7	161.1	161.4	161.8	162.4	162.8	162.9	163.4	163.8	164.3	164.8	165.1	165.4	165.7	166.6
Personal care products[1]	148.3	151.8	152.3	153.0	153.4	153.3	152.5	152.8	152.6	153.5	153.4	153.0	153.6	153.7	154.3
Personal care services[1]	166.0	171.4	171.9	172.1	172.9	173.9	174.3	174.9	175.6	176.2	176.2	177.3	177.9	178.2	179.9

28. Continued—Consumer Price Indexes for All Urban Consumers and for Urban Wage Earners and Clerical Workers: U.S. city average, by expenditure category and commodity or service group

[1982–84 = 100, unless otherwise indicated]

Series	Annual average		1999				2000								
	1998	1999	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Miscellaneous personal services	234.7	243.0	244.6	245.6	246.0	246.6	247.6	248.9	249.4	250.9	251.7	252.0	252.9	253.6	254.0
Commodity and service group:															
Commodities	141.9	144.4	145.8	146.4	146.2	146.1	146.2	147.4	149.2	149.3	149.2	149.7	149.3	148.6	150.3
Food and beverages	161.1	164.6	165.1	165.5	165.7	165.9	166.6	166.8	167.1	167.2	167.8	167.9	169.4	169.2	169.4
Commodities less food and beverages	130.5	132.5	134.3	134.9	134.6	134.4	134.0	135.7	138.4	138.4	138.0	138.6	137.7	136.4	138.8
Nondurables less food and beverages	132.6	137.5	141.0	141.9	141.3	140.9	140.5	143.9	148.5	148.5	147.6	149.1	147.5	145.6	149.8
Apparel	133.0	131.3	131.8	134.6	133.6	130.1	126.8	129.2	132.5	133.3	132.2	128.3	124.5	125.3	130.4
Nondurables less food, beverages, and apparel	137.4	146.0	151.2	151.2	150.7	152.1	153.1	157.2	162.7	162.3	161.5	165.8	165.4	162.0	124.8 197.2
Durables	127.6	126.0	125.7	125.9	126.0	125.9	125.7	125.3	125.6	125.6	125.8	125.4	125.2	124.7	124.8
Services	184.2	188.8	190.1	190.2	190.5	190.5	191.4	192.2	193.1	193.3	193.6	195.0	196.1	197.0	197.2
Rent of shelter[3]	189.6	195.0	196.1	196.3	196.3	196.3	197.6	198.5	199.7	199.8	199.9	200.8	201.7	202.7	202.6
Transporatation services	187.9	190.7	189.9	191.9	192.7	192.8	193.0	193.7	195.0	195.2	195.7	196.1	196.5	197.4	197.2
Other services	216.9	223.1	224.5	225.1	226.0	226.5	227.4	227.4	227.8	228.0	228.4	228.7	229.9	231.3	231.5
Special indexes:															
All items less food	163.4	167.0	168.5	168.8	168.8	168.8	169.2	170.3	171.9	172.0	172.1	173.2	173.5	173.5	174.6
All items less shelter	157.2	160.2	161.6	162.0	162.1	162.1	162.3	163.3	164.8	164.9	165.1	166.0	166.2	166.0	167.4
All items less medical care	158.6	162.0	163.2	163.6	163.6	163.6	164.0	164.9	166.3	166.4	166.5	167.5	167.8	167.9	168.8
Commodities less food	132.0	134.0	135.8	136.3	136.1	135.9	135.6	137.2	139.9	139.9	139.4	140.1	139.2	138.0	140.3
Nondurables less food	134.6	139.4	142.8	143.7	143.1	142.8	142.4	145.7	150.1	150.1	149.3	150.7	149.3	147.5	151.5
Nondurables less food and apparel	139.2	147.5	152.3	152.3	151.9	153.2	154.2	158.0	163.0	162.7	161.9	166.0	165.7	162.6	166.2
Nondurables	146.9	151.2	153.2	154.0	153.7	153.6	153.7	155.6	158.1	158.2	158.0	158.8	158.4	157.6	160.0
Services less rent of shelter[3]	191.8	195.8	197.3	197.4	197.9	198.0	198.6	199.2	199.9	200.2	200.9	202.9	204.2	205.0	205.7
Services less medical care services	178.4	182.7	183.9	184.1	184.3	184.3	185.1	185.8	186.7	186.9	187.2	188.6	189.6	190.5	190.7
Energy	102.9	106.6	113.2	111.6	111.2	112.2	112.5	116.7	122.2	120.7	121.0	129.6	129.7	125.9	130.6
All items less energy	170.9	174.4	175.1	175.7	175.8	175.7	176.2	176.8	177.7	178.0	178.1	178.2	178.5	179.1	179.6
All items less food and energy	173.4	177.0	177.7	178.3	178.4	178.2	178.7	179.4	180.4	180.7	180.8	180.8	181.1	181.7	182.3
Commodities less food and energy	143.2	144.1	144.6	145.3	145.0	144.2	143.6	144.2	145.3	145.9	145.5	144.5	143.8	143.7	145.1
Energy commodities	92.1	100.0	109.1	109.1	108.7	111.8	112.8	120.6	131.7	128.4	127.9	137.6	135.0	127.9	135.2
Services less energy	190.6	195.7	196.6	197.2	197.5	197.7	198.7	199.5	200.5	200.7	200.9	201.6	202.5	203.5	203.5
CONSUMER PRICE INDEX FOR URBAN WAGE EARNERS AND CLERICAL WORKERS															
All items	159.7	163.2	164.7	165.0	165.1	165.1	165.5	166.4	167.8	167.9	168.1	169.1	169.3	169.3	170.4
All items (1967 = 100)	475.6	486.2	490.5	491.5	491.7	491.8	492.9	495.6	499.7	500.1	500.7	503.8	504.4	504.2	507.6
Food and beverages	160.4	163.8	164.3	164.7	164.9	165.2	165.9	166.1	166.4	166.5	167.2	167.3	168.0	168.6	168.8
Food	160.0	163.4	163.9	164.4	164.5	164.7	165.4	165.6	165.9	166.0	166.7	166.8	167.6	189.9	168.3
Food at home	160.0	163.0	163.5	164.0	164.0	164.2	165.1	165.1	165.3	165.4	166.4	166.3	167.3	156.8	168.1
Cereals and bakery products	180.9	184.7	185.0	185.0	184.5	185.7	185.5	185.8	185.9	186.9	188.4	187.3	189.2	161.0	188.4
Meats, poultry, fish, and eggs	147.0	147.6	148.9	148.8	150.1	149.4	149.8	150.8	152.0	152.5	153.5	154.6	155.4	202.5	156.6
Dairy and related products[1]	150.4	159.4	158.4	164.0	164.6	161.9	159.9	160.4	158.7	160.2	159.3	159.4	160.5	138.2	161.6
Fruits and vegetables	197.0	201.8	201.6	201.0	199.8	202.8	207.0	201.7	200.5	200.5	203.1	198.9	200.0	201.5	203.6
Nonalcoholic beverages and beverage materials	131.8	133.2	133.0	133.4	132.7	133.5	136.0	137.6	137.8	136.7	136.4	136.7	137.5	137.4	137.1
Other foods at home	150.2	152.8	153.3	152.9	152.3	152.7	153.7	153.8	154.5	153.4	154.9	155.6	156.0	156.2	156.1
Sugar and sweets	150.1	152.2	153.3	153.2	152.0	152.3	154.8	154.3	154.5	152.3	153.6	153.9	154.2	154.4	154.4
Fats and oils	146.5	147.9	148.1	148.6	144.9	144.7	146.8	145.2	145.7	144.5	146.9	146.4	147.9	148.6	148.5
Other foods	165.4	168.8	169.2	168.5	168.8	169.4	169.8	170.5	171.6	170.7	172.2	173.4	173.5	173.6	173.5
Other miscellaneous foods[1,2]	102.6	104.6	105.1	103.8	103.4	105.2	103.9	106.2	106.7	104.7	106.1	108.0	108.4	109.0	107.5
Food away from home[1]	161.1	165.0	165.8	166.1	166.5	166.8	167.1	167.6	167.9	168.1	168.3	168.6	169.1	169.5	170.0
Other food away from home[1,2]	101.6	105.1	106.2	106.6	106.8	106.9	107.4	107.8	107.8	108.3	108.5	108.4	108.8	109.6	110.4
Alcoholic beverages	164.6	168.8	169.8	169.5	170.4	171.0	171.6	172.2	172.8	172.9	172.9	173.6	174.4	174.7	174.4
Housing	158.7	160.0	161.3	161.0	161.1	161.1	161.8	162.7	163.2	163.3	163.6	165.2	166.1	166.6	167.3
Shelter	176.6	181.6	182.6	182.8	183.1	183.3	184.1	184.8	185.6	185.8	186.1	186.8	187.5	188.4	188.7
Rent of primary residence	171.7	177.1	178.0	178.4	179.3	179.9	180.3	180.7	181.2	181.4	181.8	182.3	183.1	184.1	184.8
Lodging away from home[2]	109.0	122.2	113.8	113.1	108.4	105.7	110.8	114.5	119.9	118.7	117.8	120.9	123.1	122.5	118.3
Owners' equivalent rent of primary residence[3]	171.1	175.7	176.5	176.8	177.4	177.8	178.2	178.6	178.8	179.1	179.5	180.0	180.4	181.3	181.9
Tenants' and household insurance[1,2]	100.0	101.6	102.5	102.4	102.3	102.4	102.6	102.6	102.8	103.3	104.0	104.1	104.4	104.2	104.4
Fuels and utilities	128.4	128.7	132.6	130.1	129.8	129.2	129.5	132.0	131.2	131.1	131.9	138.7	141.0	140.4	143.4
Fuels	113.3	113.0	117.2	114.4	114.0	113.5	113.6	116.3	115.4	115.2	116.0	123.3	125.7	125.0	128.2
Fuel oil and other fuels	90.3	91.7	93.9	97.7	100.7	106.0	114.0	144.5	129.6	123.0	120.9	120.2	120.1	120.1	133.1
Gas (piped) and electricity	120.8	120.4	124.9	121.5	120.9	119.8	119.4	120.1	120.2	120.5	121.6	129.9	132.5	131.8	134.4
Household furnishings and operations	125.0	124.7	124.8	124.5	124.2	124.2	124.5	124.6	125.3	125.6	125.5	125.3	125.7	125.7	126.1
Apparel	131.6	130.1	130.5	133.1	132.3	129.0	125.9	127.9	131.0	131.8	130.9	127.3	123.6	124.0	128.7
Men's and boys' apparel	131.4	131.2	130.3	134.0	133.3	131.6	129.3	129.9	131.5	131.5	132.7	129.5	126.6	126.8	128.8
Women's and girls' apparel	123.9	121.3	123.3	126.0	124.4	119.8	114.2	118.0	123.5	124.3	122.1	117.4	112.2	113.2	121.5
Infants' and toddlers' apparel[1]	126.7	130.3	131.4	134.1	134.3	134.8	134.9	134.7	135.7	134.1	133.4	132.0	129.8	128.4	129.0
Footwear	128.7	126.2	125.1	126.6	126.9	124.2	122.3	122.6	124.7	127.1	126.6	124.6	120.9	121.5	124.8
Transportation	140.5	143.4	146.0	146.6	146.9	147.6	147.7	149.1	152.9	152.2	152.5	155.5	154.4	152.3	154.2
Private transportation	138.0	140.7	143.6	143.9	144.2	145.0	145.1	146.4	150.1	149.5	149.7	152.8	151.6	149.3	151.4
New and used motor vehicles[2]	100.3	100.4	100.7	101.2	101.5	101.5	101.2	100.7	100.8	101.2	101.5	101.4	101.1	100.9	101.0

28. Continued—Consumer Price Indexes for All Urban Consumers and for Urban Wage Earners and Clerical Workers: U.S. city average, by expenditure category and commodity or service group

[1982–84 = 100, unless otherwise indicated]

Series	Annual average		1999				2000								
	1998	1999	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
New vehicles	144.6	144.0	142.8	143.5	144.3	144.7	144.5	144.2	144.5	144.7	144.5	144.1	143.7	143.1	142.5
Used cars and trucks[1]	152.0	153.3	157.0	157.7	157.3	156.3	155.3	154.4	154.4	155.4	156.8	157.1	156.6	156.5	157.5
Motor fuel	92.2	100.8	110.6	110.0	109.5	112.3	112.9	118.6	132.0	128.5	128.5	140.1	136.2	128.0	135.3
Gasoline (all types)	91.7	100.2	110.0	109.4	108.9	111.7	112.3	117.9	131.2	127.8	127.9	139.4	135.5	127.3	134.6
Motor vehicle parts and equipment	100.5	100.0	99.9	99.8	100.6	100.2	100.3	100.5	100.9	100.6	100.5	100.5	100.8	100.7	100.9
Motor vehicle maintenance and repair	168.2	173.3	174.3	174.7	175.1	175.2	176.1	176.6	177.2	177.4	177.8	178.3	178.7	179.6	180.2
Public transportation	187.1	193.1	190.7	196.3	197.0	196.0	194.8	198.8	203.4	202.9	203.9	205.5	206.9	208.7	206.4
Medical care	241.4	249.7	251.4	251.9	252.5	253.2	254.5	256.2	257.3	258.0	258.5	259.7	260.6	261.7	262.2
Medical care commodities	218.6	226.8	229.0	229.1	229.5	230.2	230.7	231.0	231.8	232.4	232.9	233.7	234.2	234.6	235.0
Medical care services	246.6	254.9	256.4	257.0	257.6	258.4	259.9	261.9	263.1	263.8	264.4	265.6	266.6	267.9	268.5
Professional services	223.7	230.8	232.0	232.5	233.1	233.4	234.8	236.7	238.0	238.6	239.0	239.9	240.3	240.9	241.3
Hospital and related services	283.6	295.5	298.2	298.9	299.8	302.1	304.1	306.4	307.5	308.7	309.5	311.7	314.2	317.1	318.2
Recreation[2]	100.9	101.3	101.0	101.1	101.0	101.2	101.4	101.6	102.0	102.0	102.3	102.5	102.7	102.9	102.8
Video and audio[1,2]	101.1	100.5	99.8	99.9	99.9	99.8	100.2	100.4	100.6	100.0	101.0	101.2	100.9	101.3	101.1
Education and communication[2]	100.4	101.5	102.1	102.3	102.5	102.5	103.0	102.5	102.2	102.1	102.1	101.7	102.2	103.0	102.8
Education[2]	102.1	107.2	109.5	109.7	109.4	109.4	110.5	110.9	111.0	111.1	111.3	111.8	112.1	113.2	115.1
Educational books and supplies	253.1	264.1	269.9	271.8	256.5	256.9	276.6	281.3	280.0	279.9	280.0	280.9	281.5	283.6	288.6
Tuition, other school fees, and child care	288.5	302.8	309.5	310.0	310.4	310.4	311.7	312.7	312.8	313.4	313.8	315.4	316.2	319.2	324.7
Communication[1,2]	99.1	96.9	96.2	96.3	96.9	97.0	97.1	95.7	95.3	94.8	94.7	93.6	94.3	94.8	93.1
Information and information processing[1,2]	99.0	96.5	95.8	95.9	96.6	96.6	96.7	95.3	94.8	94.4	94.3	93.0	93.9	94.4	92.6
Telephone services[1,2]	100.7	100.2	99.7	100.0	100.8	100.9	101.1	99.6	99.1	98.8	98.7	97.4	98.4	99.1	97.1
Information and information processing other than telephone services[1,4]	41.2	31.6	30.3	29.9	29.3	29.3	28.9	28.6	28.2	27.6	27.5	27.0	26.6	26.1	25.9
Personal computers and peripheral equipment[1,2]	77.9	53.1	49.4	48.1	46.9	46.9	45.7	44.5	43.6	42.0	41.8	40.7	39.8	39.1	38.5
Other goods and services	236.1	261.9	267.3	267.9	267.4	267.3	269.3	271.7	273.3	278.0	275.4	274.5	277.9	276.8	280.9
Tobacco and smoking products	274.8	356.2	374.4	374.0	370.4	369.7	375.7	383.6	387.8	404.9	393.7	388.7	400.9	394.2	408.2
Personal care[1]	156.8	161.3	161.9	162.6	163.0	163.1	163.5	163.9	164.3	164.6	164.9	165.3	165.5	166.1	166.5
Personal care products[1]	149.3	152.5	153.7	154.1	154.0	153.1	153.4	153.2	154.1	153.9	153.4	154.0	154.1	155.0	155.1
Personal care services[1]	166.3	171.7	172.4	173.2	174.4	174.7	175.3	176.1	176.6	176.6	177.7	178.3	178.6	179.7	180.3
Miscellaneous personal services	234.0	243.1	244.5	245.5	245.9	246.7	247.6	248.9	249.4	250.4	251.2	251.4	252.2	253.0	253.4
Commodity and service group:															
Commodities	141.8	144.7	146.3	146.8	146.6	146.6	146.6	147.8	149.8	149.9	149.9	150.6	150.1	149.3	151.0
Food and beverages	160.4	163.8	164.3	164.7	164.9	165.2	165.9	166.1	166.4	166.5	167.2	167.3	168.0	168.6	168.8
Commodities less food and beverages	130.6	133.2	135.4	165.9	135.6	135.4	135.1	136.8	139.6	139.6	139.3	140.3	139.2	137.7	140.2
Nondurables less food and beverages	132.1	138.1	142.1	142.9	142.2	142.0	141.7	145.1	150.2	150.2	149.4	151.5	149.7	147.2	151.8
Apparel	131.6	130.1	130.5	133.1	132.3	129.0	125.9	127.9	131.0	131.8	130.9	127.3	123.6	124.0	128.7
Nondurables less food, beverages, and apparel	137.0	147.2	153.2	153.1	152.5	153.9	155.0	159.3	165.7	165.2	164.4	169.6	168.7	164.6	169.3
Durables	127.3	126.0	126.1	126.3	126.4	126.3	126.0	125.6	125.8	126.0	126.2	125.9	125.6	125.2	125.3
Services	181.0	185.3	186.6	186.7	187.1	187.2	187.9	188.5	189.2	189.4	189.8	191.2	192.2	193.0	193.4
Rent of shelter[3]	170.1	174.9	175.8	176.1	176.3	176.5	177.3	178.0	178.7	178.9	179.2	179.9	180.6	181.5	181.7
Transporatation services	185.4	187.9	187.3	189.0	189.8	189.9	190.2	190.8	191.8	192.0	192.4	192.6	193.0	193.8	193.7
Other services	213.7	219.6	220.9	221.6	222.3	222.9	223.8	223.7	224.0	224.2	224.6	224.7	225.9	227.3	227.3
Special indexes:															
All items less food	159.5	163.1	164.7	165.0	165.1	165.1	165.4	166.4	168.0	168.2	168.3	169.5	169.6	169.4	170.7
All items less shelter	155.0	158.1	159.7	160.1	160.1	160.1	160.3	161.3	162.8	163.0	163.1	164.3	164.3	163.9	165.4
All items less medical care	155.8	159.2	160.7	161.0	161.1	161.1	161.4	162.3	163.6	163.8	164.0	165.0	165.1	165.0	166.2
Commodities less food	132.0	134.6	136.7	137.2	137.0	136.8	136.5	138.2	141.0	141.0	140.7	141.7	140.6	139.1	141.6
Nondurables less food	134.1	140.0	143.8	144.6	144.0	143.8	143.6	146.8	151.7	151.7	150.9	152.9	151.2	148.9	153.3
Nondurables less food and apparel	138.7	148.4	154.0	153.8	153.4	154.7	155.8	159.8	165.7	165.3	164.5	169.4	168.7	164.9	169.2
Nondurables	146.5	151.3	153.6	154.3	154.0	154.0	154.2	156.0	158.8	158.9	158.8	159.9	159.4	158.3	160.8
Services less rent of shelter[3]	170.7	174.1	175.5	175.4	175.8	175.9	176.4	176.9	177.4	177.7	178.2	180.2	181.3	181.9	182.5
Services less medical care services	175.4	179.5	180.7	180.8	181.1	181.2	181.9	182.4	183.1	183.3	183.7	185.1	186.0	186.6	187.2
Energy	102.1	106.1	113.1	111.4	111.0	112.1	112.5	116.7	122.9	121.0	121.5	130.9	130.1	125.7	130.9
All items less energy	167.6	171.1	171.8	172.4	172.6	172.5	172.8	173.3	174.1	174.5	174.6	174.6	174.9	175.3	176.0
All items less food and energy	169.6	173.1	173.9	174.5	174.7	174.5	174.8	175.3	176.2	176.7	176.7	176.6	176.8	177.2	178.0
Commodities less food and energy	142.7	144.3	145.0	145.7	145.4	144.6	144.1	144.6	145.6	146.4	146.0	145.0	144.5	144.2	145.7
Energy commodities	92.3	100.3	109.7	109.4	109.1	112.1	113.1	120.4	132.0	128.3	128.3	139.1	135.4	127.7	135.4
Services less energy	187.7	192.6	193.4	194.0	194.4	194.7	195.5	196.2	196.9	197.1	197.5	198.0	198.8	199.5	200.0

[1] Not seasonally adjusted.

[2] Indexes on a December 1997 = 100 base.

[3] Indexes on a December 1982 = 100 base.

[4] Indexes on a December 1988 = 100 base.

– Data not available.

NOTE: Index applies to a month as a whole, not to any specific date.

29. Consumer Price Index: U.S. city average and available local area data: all items

[1982–84 = 100, unless otherwise indicated]

Area	Pricing schedule[1]	All Urban Consumers							Urban Wage Earners						
		1999		2000					1999		2000				
		Aug.	Sept	May	June	July	Aug.	Sept.	Aug.	Sept.	May	June	July	Aug.	Sept.
U.S. city average	M	167.1	167.9	171.3	172.4	172.8	172.8	173.7	163.8	164.7	168.1	169.2	169.4	169.3	170.4
Region and area size[2]															
Northeast urban	M	174.1	174.8	178.2	179.0	179.8	179.9	180.7	170.9	171.9	175.3	175.9	176.7	176.6	177.6
Size A—More than 1,500,000	M	175.1	175.7	179.0	179.7	180.5	180.8	181.7	171.0	171.8	175.0	175.7	176.5	176.1	177.7
Size B/C—50,000 to 1,500,000[3]	M	104.3	105.1	107.3	107.7	108.2	108.0	108.3	103.8	104.7	106.9	107.3	107.7	107.4	107.9
Midwest urban[4]	M	163.2	164.3	167.4	169.7	168.8	168.2	170.0	159.4	160.6	163.8	166.2	165.1	164.3	166.4
Size A—More than 1,500,000	M	164.8	165.7	169.0	171.3	170.5	170.0	171.5	160.2	161.1	164.5	166.9	165.9	165.3	167.0
Size B/C—50,000 to 1,500,000[3]	M	104.2	105.1	106.9	108.4	107.7	107.1	108.6	104.0	104.1	107.0	108.7	107.7	106.9	108.7
Size D—Nonmetropolitan (less than 50,000)	M	157.7	158.6	161.4	163.1	163.2	162.5	164.5	156.1	157.1	160.0	161.8	161.7	160.9	163.0
South urban	M	162.6	163.2	166.6	167.5	168.0	168.0	168.5	160.6	161.5	164.9	165.8	166.3	166.1	166.8
Size A—More than 1,500,000	M	161.9	162.7	166.1	167.2	167.9	167.9	168.4	159.5	160.4	163.7	165.0	166.7	166.5	166.1
Size B/C—50,000 to 1,500,000[3]	M	104.4	104.8	107.1	107.6	107.8	107.8	108.1	104.0	104.6	107.0	107.4	107.6	107.5	107.9
Size D—Nonmetropolitan (less than 50,000)	M	163.7	164.1	167.0	167.1	167.7	167.8	168.2	164.1	164.8	167.9	168.1	168.6	168.7	169.2
West urban	M	169.5	170.0	173.9	174.3	175.2	175.9	176.6	165.3	165.8	169.6	169.9	170.8	171.2	172.1
Size A—More than 1,500,000	M	170.5	171.2	175.4	175.8	176.8	177.6	178.4	164.7	165.3	169.3	169.6	170.6	171.2	172.1
Size B/C—50,000 to 1,500,000[3]	M	105.2	105.2	107.3	107.7	108.1	108.3	108.8	105.1	105.1	107.1	107.4	107.9	108.0	108.6
Size classes:															
A[5]	M	151.6	152.2	155.4	156.4	156.8	157.0	157.8	150.1	150.8	154.0	155.1	155.4	155.4	156.4
B/C[3]	M	104.5	195.0	107.1	107.8	107.9	107.8	108.3	104.1	104.8	107.0	107.7	107.7	107.4	108.2
D	M	163.1	163.7	166.8	167.5	167.8	167.6	168.7	162.1	163.0	166.1	166.8	167.0	166.8	167.9
Selected local areas[6]															
Chicago–Gary–Kenosha, IL–IN–WI	M	169.3	169.7	173.5	176.0	174.6	173.7	174.8	163.5	164.1	167.9	170.4	168.9	168.0	169.2
Los Angeles–Riverside–Orange County, CA	M	166.3	167.2	171.1	171.0	171.7	172.2	173.3	159.8	160.7	164.4	164.3	165.0	165.3	166.3
New York, NY–Northern NJ–Long Island, NY–NJ–CT–PA	M	177.6	178.2	181.3	182.0	182.8	183.1	184.4	173.2	173.9	176.9	177.6	178.4	178.5	179.9
Boston–Brockton–Nashua, MA–NH–ME–CT	1	–	176.8	–	–	183.2	–	184.3	–	175.2	180.5	–	182.3	-	183.2
Cleveland–Akron, OH	1	–	164.2	–	–	168.3	–	170.5	–	156.4	158.9	–	160.5	-	162.8
Dallas–Ft Worth, TX	1	–	159.8	–	–	166.2	–	166.9	–	159.6	163.1	–	166.2	-	166.8
Washington–Baltimore, DC–MD–VA–WV[7]	1	–	105.4	–	–	108.4	–	108.7	–	105.3	106.6	–	108.2	-	108.7
Atlanta, GA	2	165.9	–	–	171.3	–	172.1	171.9	163.2	–	–	168.9	–	169.6	–
Detroit–Ann Arbor–Flint, MI	2	164.2	–	–	170.9	–	170.1	170.0	158.7	–	–	165.8	–	164.6	–
Houston–Galveston–Brazoria, TX	2	148.9	–	–	154.1	–	154.4	154.3	147.9	–	–	153.1	-	153.1	–
Miami–Ft. Lauderdale, FL	2	162.3	–	–	168.0	–	168.4	168.4	160.0	–	–	165.7	–	165.8	–
Philadelphia–Wilmington–Atlantic City, PA–NJ–DE–MD	2	173.1	–	–	176.6	–	177.5	177.4	172.6	–	–	176.1	–	177.1	–
San Francisco–Oakland–San Jose, CA	2	173.5	–	–	179.1	–	181.7	181.7	170.0	–	–	175.2	–	177.8	–
Seattle–Tacoma–Bremerton, WA	2	173.4	–	–	179.2	–	180.3	180.2	168.8	–	–	174..5		175.4	–

[1] Foods, fuels, and several other items priced every month in all areas; most other goods and services priced as indicated:
M—Every month.
1—January, March, May, July, September, and November.
2—February, April, June, August, October, and December.

[2] Regions defined as the four Census regions.

[3] Indexes on a December 1996 = 100 base.

[4] The "North Central" region has been renamed the "Midwest" region by the Census Bureau. It is composed of the same geographic entities.

[5] Indexes on a December 1986 = 100 base.

[6] In addition, the following metropolitan areas are published semiannually and appear in tables 34 and 39 of the January and July issues of the *CPI Detailed Report*: Anchorage, AK; Cincinnati–Hamilton, OH–KY–IN; Denver–Boulder–Greeley, CO; Honolulu, HI; Kansas City, MO–KS; Milwaukee–Racine, WI; Minneapolis–St. Paul, MN–WI; Pittsburgh, PA; Portland–Salem, OR–WA; St Louis, MO–IL; San Diego, CA; Tampa–St. Petersburg–Clearwater, FL.

[7] Indexes on a November 1996 = 100 base.

– Data not available.

NOTE: Local area CPI indexes are byproducts of the national CPI program. Each local index has a smaller sample size and is, therefore, subject to substantially more sampling and other measurement error. As a result, local area indexes show greater volatility than the national index, although their long-term trends are similar. Therefore, the Bureau of Labor Statistics strongly urges users to consider adopting the national average CPI for use in their escalator clauses. Index applies to a month as a whole, not to any specific date.

30. Annual data: Consumer Price Index, U.S. city average, all items and major groups

[1982–84 = 100]

Series	1991	1992	1993	1994	1995	1996	1997	1998	1999
Consumer Price Index for All Urban Consumers:									
All items:									
Index	136.2	140.3	144.5	148.2	152.4	156.9	160.5	163.0	166.6
Percent change	4.2	3.0	3.0	2.6	2.8	3.0	2.3	1.6	2.2
Food and beverages:									
Index	136.8	138.7	141.6	144.9	148.9	153.7	157.7	161.1	164.6
Percent change	3.6	1.4	2.1	2.3	2.8	3.2	2.6	2.2	2.2
Housing:									
Index	133.6	137.5	141.2	144.8	148.5	152.8	156.8	160.4	163.9
Percent change	4.0	2.9	2.7	2.5	2.6	2.9	2.6	2.3	2.2
Apparel:									
Index	128.7	131.9	133.7	133.4	132.0	131.7	132.9	133.0	131.3
Percent change	3.7	2.5	1.4	–.2	–1.0	–.2	.9	.1	–1.3
Transportation:									
Index	123.8	126.5	130.4	134.3	139.1	143.0	144.3	141.6	144.4
Percent change	2.7	2.2	3.1	3.0	3.6	2.8	0.9	–1.9	2.0
Medical care:									
Index	177.0	190.1	201.4	211.0	220.5	228.2	234.6	242.1	250.6
Percent change	8.7	7.4	5.9	4.8	4.5	3.5	2.8	3.2	3.5
Other goods and services:									
Index	171.6	183.3	192.9	198.5	206.9	215.4	224.8	237.7	258.3
Percent change	7.9	6.8	5.2	2.9	4.2	4.1	4.4	5.7	8.7
Consumer Price Index for Urban Wage Earners and Clerical Workers:									
All items:									
Index	134.3	138.2	142.1	145.6	149.8	154.1	157.6	159.7	163.2
Percent change	4.1	2.9	2.8	2.5	2.9	2.9	2.3	1.3	2.2

31. Producer Price Indexes, by stage of processing

[1982 = 100]

Grouping	Annual average		1999				2000								
	1998	1999	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Finished goods	130.7	133.0	134.7	135.1	134.9	134.9	134.7	136.0	136.8	136.7	137.5	138.4	138.3	138.1	139.2
Finished consumer goods	128.9	132.0	134.6	134.5	134.3	134.3	133.9	135.7	136.7	136.5	137.6	138.8	138.6	138.5	139.9
Finished consumer foods	134.3	135.1	136.7	135.8	135.4	135.6	135.0	136.0	136.0	137.3	138.0	137.3	137.4	136.9	137.1
Finshed consumer goods excluding foods	126.4	130.5	133.5	133.7	133.6	133.6	133.3	135.4	136.8	136.0	137.2	139.2	139.0	139.0	140.8
Nondurable goods less food	122.2	127.9	132.8	131.5	131.6	131.7	131.4	134.3	136.4	135.3	136.9	139.9	139.7	139.9	142.7
Durable goods	132.9	133.0	131.2	134.9	134.6	134.4	134.1	133.9	133.8	133.9	134.0	133.6	133.2	132.7	132.5
Capital equipment	137.6	137.6	136.7	138.5	138.3	138.3	138.4	138.5	138.5	138.5	138.7	138.5	138.6	138.4	138.4
Intermediate materials, supplies, and components	123.0	123.2	125.3	125.0	125.2	125.4	125.9	126.9	127.8	128.0	128.3	129.7	130.1	129.9	131.0
Materials and components for manufacturing	126.1	124.6	125.4	125.9	125.9	125.9	126.4	127.0	127.6	128.2	128.4	128.6	129.0	128.6	128.5
Materials for food manufacturing	123.2	120.8	122.0	122.2	120.9	118.2	117.6	117.5	118.1	119.6	120.6	120.7	120.5	119.1	118.9
Materials for nondurable manufacturing	126.7	124.9	126.5	127.7	127.8	128.2	128.6	129.7	131.3	132.3	133.2	133.9	135.0	134.2	133.6
Materials for durable manufacturing	128.0	125.1	126.2	126.5	126.7	127.2	128.6	129.6	129.7	130.0	129.6	129.3	129.3	129.1	129.4
Components for manufacturing	125.9	125.7	125.7	125.7	125.7	125.8	125.9	125.9	126.0	126.1	126.0	126.1	126.2	126.2	126.3
Materials and components for construction	146.8	148.9	149.6	149.1	149.4	149.8	150.4	150.8	151.3	151.6	151.1	150.9	150.5	150.3	150.3
Processed fuels and lubricants	81.1	84.6	92.5	89.3	90.2	90.6	91.5	94.8	97.4	95.7	96.7	103.2	103.9	104.6	110.0
Containers	140.8	142.5	145.7	146.3	146.5	146.5	147.2	147.2	148.1	151.6	152.8	153.3	153.3	153.1	153.5
Supplies	134.8	134.2	134.4	134.8	135.0	135.1	135.2	135.6	136.0	136.4	136.6	137.1	137.3	136.9	137.3
Crude materials for further processing	96.8	98.2	107.3	104.0	109.2	103.5	105.8	110.3	112.9	111.3	115.4	121.9	120.8	119.2	124.8
Foodstuffs and feedstuffs	103.9	98.7	100.1	98.8	99.5	96.9	96.5	97.6	101.4	103.4	104.6	101.8	99.4	95.4	97.6
Crude nonfood materials	88.4	94.3	108.3	103.8	111.9	104.3	108.3	115.1	116.7	112.7	118.6	131.4	131.1	131.2	139.1
Special groupings:															
Finished goods, excluding foods	129.5	132.3	134.0	134.7	134.7	134.6	134.5	135.9	136.9	136.4	137.2	138.6	138.4	138.4	139.6
Finished energy goods	75.1	78.8	85.8	83.5	83.6	83.6	83.8	87.5	90.9	89.2	91.5	97.0	96.2	96.3	100.6
Finished goods less energy	141.1	143.0	143.1	144.2	144.0	144.0	143.6	144.3	144.3	144.6	145.0	144.6	144.7	144.5	144.6
Finished consumer goods less energy	142.5	145.2	145.8	146.6	146.3	146.4	145.8	146.7	146.7	147.2	147.6	147.1	147.2	147.0	147.1
Finished goods less food and energy	143.7	146.1	145.7	147.5	147.4	147.4	147.0	147.5	147.5	147.5	147.8	147.5	147.5	147.4	147.5
Finished consumer goods less food and energy	147.7	151.7	151.7	153.6	153.4	153.4	152.8	153.6	153.6	153.5	153.8	153.4	153.5	153.4	153.6
Consumer nondurable goods less food and energy	159.1	166.3	167.9	168.1	168.2	168.2	167.3	169.0	169.1	168.9	169.4	169.0	169.4	169.8	170.3
Intermediate materials less foods and feeds	123.4	123.9	126.0	125.7	126.0	126.2	126.8	127.8	128.8	128.9	129.2	130.7	131.0	131.0	132.1
Intermediate foods and feeds	116.2	111.1	111.8	112.4	111.6	109.7	109.3	110.0	111.0	111.9	113.2	113.5	112.7	110.2	111.2
Intermediate energy goods	80.8	84.6	92.1	89.0	89.9	90.3	91.2	94.5	97.1	95.4	96.5	102.9	103.6	104.3	109.6
Intermediate goods less energy	132.4	131.7	132.5	132.9	133.0	133.0	133.5	133.9	134.5	135.1	135.2	135.5	135.7	135.3	135.4
Intermediate materials less foods and energy	133.5	133.1	133.9	134.2	134.4	134.6	135.1	135.5	136.1	136.6	136.7	136.9	137.2	137.0	137.0
Crude energy materials	68.6	78.5	95.4	88.7	98.9	87.9	92.0	100.2	102.5	97.9	105.8	122.9	123.4	124.2	134.3
Crude materials less energy	113.6	107.9	110.0	109.8	110.5	109.5	110.2	111.5	114.1	115.1	115.8	113.3	110.9	107.4	109.1
Crude nonfood materials less energy	142.1	135.2	139.1	141.7	142.6	146.0	149.8	151.3	150.9	149.2	148.5	146.8	144.2	142.3	142.6

32. Producer Price Indexes for the net output of major industry groups

[December 1984 = 100, unless otherwise indicated]

SIC	Industry	Annual average		1999				2000								
		1998	1999	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
–	**Total mining industries**	70.8	78.0	91.5	87.7	95.1	86.7	89.5	95.8	98.9	95.7	100.0	113.8	114.8	115.4	122.6
10	Metal mining	73.2	70.3	70.4	76.3	73.4	72.6	73.9	75.3	73.3	71.8	71.7	73.7	72.8	72.8	73.6
12	Coal mining (12/85 = 100)	89.5	87.3	85.9	86.0	86.1	85.4	85.3	84.7	84.8	85.9	86.0	85.0	85.4	83.5	83.9
13	Oil and gas extraction (12/85 = 100)	68.3	78.5	96.9	91.2	101.6	90.4	94.2	102.6	107.0	102.7	108.3	127.1	128.3	129.6	139.3
14	Mining and quarrying of nonmetallic minerals, except fuels	132.2	134.0	134.3	134.4	134.4	134.4	135.0	135.3	135.7	136.7	137.5	136.8	138.4	137.9	138.0
–	**Total manufacturing industries**	126.2	128.3	129.7	130.2	130.3	130.5	130.8	132.2	132.9	132.6	133.4	134.0	133.6	133.4	134.6
20	Food and kindred products	126.3	126.3	127.5	127.5	127.1	126.7	126.7	127.2	127.4	128.1	129.1	129.1	129.3	128.2	128.4
21	Tobacco manufactures	243.1	325.7	344.5	344.4	344.5	345.0	329.4	348.6	347.3	341.8	347.1	342.2	342.3	350.5	350.5
22	Textile mill products	118.6	116.3	115.9	116.1	115.9	116.1	116.2	116.4	116.5	116.5	116.3	116.2	116.8	116.8	116.7
23	Apparel and other finished products made from fabrics and similar materials	124.8	125.3	125.6	125.6	125.4	125.3	125.2	125.2	125.6	125.7	125.6	125.5	125.8	125.6	125.6
24	Lumber and wood products, except furniture	157.0	161.8	163.1	160.0	159.6	160.6	161.4	161.6	162.1	161.7	#####	158.4	157.2	155.8	155.4
25	Furniture and fixtures	139.7	141.3	141.8	142.0	142.0	142.1	142.4	142.5	143.0	143.2	143.3	143.5	143.7	143.6	143.5
26	Paper and allied products	136.2	136.4	138.7	139.9	140.2	140.4	141.0	141.5	143.2	145.4	146.9	147.2	147.3	147.3	147.6
27	Printing, publishing, and allied industries	174.0	177.6	178.1	178.6	179.1	179.2	180.4	180.8	181.1	182.0	181.7	182.9	183.0	183.1	183.2
28	Chemicals and allied products	148.7	149.7	151.0	152.8	153.0	152.9	153.6	154.5	155.2	155.5	156.9	157.1	158.0	157.5	158.4
29	Petroleum refining and related products	66.3	76.8	90.2	87.0	89.5	91.8	94.0	104.1	111.0	105.6	111.4	118.0	112.6	112.8	124.8
30	Rubber and miscellaneous plastics products	122.1	122.2	122.8	122.9	123.3	123.4	123.5	123.5	123.5	123.7	123.3	123.9	124.8	125.0	124.9
31	Leather and leather products	137.1	136.5	136.9	137.0	137.0	137.0	137.5	137.5	137.4	137.6	137.5	137.4	137.5	138.0	138.3
32	Stone, clay, glass, and concrete products	129.3	132.6	133.2	133.6	133.7	133.5	134.4	134.6	134.7	135.0	134.8	134.9	134.9	134.6	134.9
33	Primary metal industries	120.9	115.8	116.4	117.1	117.1	117.4	118.6	119.5	120.0	120.3	120.5	120.1	119.9	120.1	120.5
34	Fabricated metal products, except machinery and transportation transportation equipment	128.7	129.1	129.2	129.4	129.6	129.7	129.9	130.0	130.3	130.4	130.3	130.5	130.3	130.4	130.5
35	Machinery, except electrical	117.7	117.3	117.1	117.1	117.1	117.0	117.1	117.3	117.4	117.4	117.5	117.6	117.6	117.5	135.5
36	Electrical and electronic machinery, equipment, and supplies	110.4	109.5	109.2	109.1	109.1	108.9	108.7	108.6	108.6	108.6	108.6	108.0	108.6	108.1	126.5
37	Transportation	133.6	134.5	132.6	136.7	136.2	136.2	136.3	136.5	136.4	136.5	136.1	135.5	136.0	135.6	130.7
38	Measuring and controlling instruments; photographic, medical, and optical goods; watches and clocks	126.0	125.7	124.9	125.2	125.3	125.6	126.0	126.2	126.0	126.0	126.3	126.5	126.5	126.6	120.6
39	Miscellaneous manufacturing industries (12/85 = 100)	129.7	130.3	130.0	130.4	130.2	130.5	130.7	131.1	130.8	130.9	131.3	130.7	131.0	131.1	135.2 126.6
	Service industries:															
42	Motor freight transportation and warehousing (06/93 = 100)	111.6	114.8	115.8	115.5	115.5	115.8	116.5	117.0	118.1	118.2	118.8	119.4	118.8	120.1	120.9
43	U.S. Postal Service (06/89 = 100)	132.3	135.3	135.2	135.2	135.2	135.2	135.2	135.2	135.2	135.2	135.2	135.2	135.2	135.2	135.4
44	Water transportation (12/92 = 100)	105.6	113.0	117.3	116.7	116.7	116.1	116.4	117.0	117.8	118.6	119.8	123.2	124.8	128.1	126.6
45	Transportation by air (12/92 = 100)	124.5	130.8	131.8	133.1	133.4	134.2	141.0	141.6	144.3	145.4	149.6	147.5	147.6	148.3	151.3
46	Pipelines, except natural gas (12/92 = 100)	99.2	98.3	98.3	98.3	98.2	98.2	102.1	101.9	101.9	101.9	101.9	102.0	102.5	102.5	102.4

33. Annual data: Producer Price Indexes, by stage of processing

[1982 = 100]

Index	1991	1992	1993	1994	1995	1996	1997	1998	1999
Finished goods									
Total	121.7	123.2	124.7	125.5	127.9	131.3	131.8	130.7	133.0
Foods	124.1	123.3	125.7	126.8	129.0	133.6	134.5	134.3	135.1
Energy	78.1	77.8	78.0	77.0	78.1	83.2	83.4	75.1	78.8
Other	131.1	134.2	135.8	137.1	140.0	142.0	142.4	143.7	146.1
Intermediate materials, supplies, and components									
Total	114.4	114.7	116.2	118.5	124.9	125.7	125.6	123.0	123.2
Foods	115.3	113.9	115.6	118.5	119.5	125.3	123.2	123.2	120.8
Energy	85.1	84.3	84.6	83.0	84.1	89.8	89.0	80.8	84.3
Other	121.4	122.0	123.8	127.1	135.2	134.0	134.2	133.5	133.1
Crude materials for further processing									
Total	101.2	100.4	102.4	101.8	102.7	113.8	111.1	96.8	98.2
Foods	105.5	105.1	108.4	106.5	105.8	121.5	112.2	103.9	98.7
Energy	80.4	78.8	76.7	72.1	69.4	85.0	87.3	68.6	78.5
Other	97.5	94.2	94.1	97.0	105.8	105.7	103.5	84.5	91.1

34. U.S. export price indexes by Standard International Trade Classification

[1995 = 100, unless otherwise indicated]

SITC Rev. 3	Industry	1999				2000								
		Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
0	**Food and live animals**	86.6	86.4	86.3	85.6	86.3	86.9	86.8	87.5	88.3	87.5	85.8	83.6	85.9
01	Meat and meat preparations	97.5	97.4	97.7	100.9	100.1	98.0	99.4	102.2	105.1	109.5	108.4	103.7	105.2
04	Cereals and cereal preparations	72.7	69.5	70.1	68.5	71.0	74.1	74.4	74.0	75.0	71.6	66.8	64.0	67.8
05	Vegetables, fruit, and nuts, prepared fresh or dry	94.3	96.6	94.3	91.2	90.9	89.0	88.6	90.6	90.1	87.8	91.2	88.5	92.0
2	**Crude materials, inedible, except fuels**	77.7	78.1	77.8	78.9	80.0	82.2	83.2	84.2	85.2	84.4	82.9	82.9	83.7
21	Hides, skins, and furskins, raw	86.5	88.6	87.8	90.5	91.1	89.5	87.7	85.5	86.5	86.7	89.7	95.4	100.5
22	Oilseeds and oleaginous fruits	85.0	82.3	78.1	79.6	80.5	84.8	86.0	88.3	89.1	86.3	80.3	78.0	83.8
24	Cork and wood	82.8	83.5	83.8	85.0	86.4	86.5	87.2	87.4	86.7	86.7	86.5	88.4	87.0
25	Pulp and waste paper	75.2	77.1	78.7	80.9	84.3	88.3	90.0	93.8	99.0	97.6	95.9	91.8	90.7
26	Textile fibers and their waste	64.4	64.5	63.4	62.5	61.2	65.7	68.6	68.9	69.0	69.6	67.7	70.7	72.2
27	Crude fertilizers and crude minerals	93.3	93.1	93.8	94.1	94.3	94.0	93.5	93.0	93.0	93.3	93.3	93.1	91.5
28	Metalliferous ores and metal scrap	73.5	75.1	77.3	78.4	80.0	80.7	80.9	80.4	79.6	78.2	78.0	78.8	78.5
3	**Mineral fuels, lubricants, and related products**	115.3	119.5	121.4	126.6	129.5	138.5	152.1	137.2	142.3	144.9	151.3	147.6	166.8
32	Coal, coke, and briquettes	97.6	97.6	97.6	97.5	96.1	96.1	96.1	94.7	94.5	93.8	93.8	93.1	93.1
33	Petroleum, petroleum products, and related materials	128.6	131.3	133.4	140.1	143.6	159.6	179.2	152.0	163.1	168.2	178.4	172.3	204.2
4	**Animal and vegetable oils, fats, and waxes**	78.8	81.9	79.0	78.0	75.8	74.3	70.8	71.6	70.1	67.1	64.6	63.2	61.8
5	**Chemicals and related products, n.e.s.**	92.3	93.3	93.3	93.6	93.8	94.2	94.4	95.8	95.8	95.5	95.3	94.6	94.1
54	Medicinal and pharmaceutical products	99.8	99.8	99.8	100.3	100.2	100.4	100.2	99.9	100.0	99.7	100.4	100.3	100.1
55	Essential oils; polishing and cleaning preparations	102.1	102.3	103.5	103.4	103.4	103.3	103.0	103.2	103.1	102.9	103.0	102.9	103.3
57	Plastics in primary forms (12/92 = 100)	92.1	94.4	94.9	95.0	94.8	94.8	95.5	97.7	98.4	98.1	97.0	95.4	93.1
58	Plastics in nonprimary forms (12/92 = 100)	97.6	97.9	97.8	98.0	97.8	98.6	100.1	100.2	99.8	99.3	99.4	99.4	99.3
59	Chemical materials and products, n.e.s.	99.2	98.9	98.8	99.1	99.2	99.9	99.6	99.4	99.3	99.1	99.3	99.3	99.2
6	**Manufactured goods classified chiefly by materials**	97.5	97.8	98.0	98.3	98.3	99.0	99.7	99.9	100.1	100.4	100.6	101.1	101.1
62	Rubber manufactures, n.e.s.	106.9	108.2	108.2	108.5	104.7	103.7	103.6	103.7	104.6	104.4	104.8	104.7	104.7
64	Paper, paperboard, and articles of paper, pulp, and paperboard	86.3	87.2	87.6	87.2	87.6	87.8	88.4	89.1	90.5	89.8	90.2	90.2	89.8
66	Nonmetallic mineral manufactures, n.e.s.	106.1	106.0	106.0	105.8	105.8	106.0	106.2	106.4	106.4	106.5	106.3	106.3	105.6
68	Nonferrous metals	88.0	90.2	90.7	92.3	93.4	98.8	101.9	100.3	98.1	100.1	102.3	106.0	106.2
7	**Machinery and transport equipment**	97.2	97.4	97.5	97.2	97.4	97.3	97.3	97.3	97.4	97.3	97.3	97.3	97.3
71	Power generating machinery and equipment	110.1	110.2	111.0	111.0	111.8	111.8	111.8	111.9	112.0	112.0	112.2	112.3	112.3
72	Machinery specialized for particular industries	105.9	106.0	106.1	104.7	106.2	106.3	106.1	106.2	106.2	106.5	106.5	106.5	106.4
74	General industrial machines and parts, n.e.s., and machine parts	107.6	107.7	107.7	107.9	107.5	107.6	108.0	108.2	108.2	108.2	108.3	108.3	108.4
75	Computer equipment and office machines	70.2	70.5	70.4	70.2	70.1	68.7	68.7	68.5	68.5	68.2	68.1	67.7	67.7
76	Telecommunications and sound recording and reproducing apparatus and equipment	96.9	96.6	96.6	96.7	96.4	97.0	96.6	96.4	97.0	96.9	96.7	96.7	96.8
77	Electrical machinery and equipment	87.6	87.4	87.3	86.7	86.4	86.6	86.3	86.4	86.3	85.7	85.6	85.7	85.6
78	Road vehicles	102.4	103.1	103.1	103.1	103.5	103.6	104.0	103.9	103.9	103.9	103.9	103.9	104.0
87	**Professional, scientific, and controlling instruments and apparatus**	105.4	105.5	105.6	105.3	105.2	105.4	105.7	105.7	105.7	105.8	106.4	106.4	106.5

35. U.S. import price indexes by Standard International Trade Classification

[1995 = 100, unless otherwise indicated]

SITC Rev. 3	Industry	1999				2000								
		Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
0	**Food and live animals**	91.5	91.0	92.4	94.7	93.7	93.6	93.1	94.0	92.3	91.3	91.4	91.6	91.2
01	Meat and meat preparations	99.4	98.4	97.7	98.4	97.8	98.2	99.1	100.2	100.2	99.1	98.1	98.9	98.9
03	Fish and crustaceans, mollusks, and other aquatic invertebrates	103.1	105.0	107.5	106.8	106.8	107.9	108.0	111.0	109.6	109.1	110.5	113.1	112.0
05	Vegetables, fruit, and nuts, prepared fresh or dry	101.6	96.5	97.2	103.6	102.0	102.1	101.2	100.7	96.8	95.7	97.2	97.5	97.8
07	Coffee, tea, cocoa, spices, and manufactures thereof	61.4	62.0	66.0	70.6	67.2	64.7	61.0	61.1	59.8	59.5	56.8	55.8	54.7
1	**Beverages and tobacco**	112.2	111.5	111.5	112.0	111.2	111.4	111.7	111.9	112.4	113.0	112.5	114.5	116.4
11	Beverages	109.1	108.5	108.5	108.7	107.9	108.2	108.5	108.7	109.4	110.1	109.4	111.7	113.9
2	**Crude materials, inedible, except fuels**	91.7	90.8	90.3	92.2	93.6	94.7	94.3	93.8	91.9	90.7	90.7	89.6	88.8
24	Cork and wood	121.7	116.7	114.9	118.7	117.7	117.0	118.6	117.6	112.9	110.1	107.0	102.1	99.5
25	Pulp and waste paper	66.0	63.9	66.8	68.2	70.5	72.0	72.4	75.1	77.0	80.1	80.7	81.4	82.0
28	Metalliferous ores and metal scrap	94.3	98.4	98.0	99.0	101.4	105.7	104.0	101.7	99.6	100.7	101.3	102.2	101.6
29	Crude animal and vegetable materials, n.e.s.	111.1	112.1	106.5	111.9	121.1	124.3	111.9	110.1	106.7	92.7	101.8	101.3	103.0
3	**Mineral fuels, lubricants, and related products**	126.5	128.0	134.7	141.2	145.2	165.7	165.4	148.5	154.3	172.0	170.4	171.2	193.0
33	Petroleum, petroleum products, and related materials	125.7	127.4	132.6	141.4	146.1	167.9	166.6	147.1	154.2	171.0	168.2	168.1	192.3
34	Gas, natural and manufactured	142.2	141.1	161.5	150.2	147.8	161.4	170.5	171.5	167.5	195.4	203.1	212.1	218.0
5	**Chemicals and related products, n.e.s.**	91.3	91.8	92.1	92.0	92.2	92.7	92.8	93.4	94.3	94.1	95.5	95.5	94.9
52	Inorganic chemicals	86.6	87.2	87.7	88.0	88.3	89.0	88.8	89.8	90.7	91.5	92.5	92.6	92.5
53	Dying, tanning, and coloring materials	90.2	90.6	91.4	89.7	88.9	89.3	88.4	88.0	87.4	86.1	87.6	89.1	87.0
54	Medicinal and pharmaceutical products	97.0	97.4	97.8	97.3	98.2	98.2	97.3	97.3	97.3	96.8	97.5	97.3	96.7
55	Essential oils; polishing and cleaning preparations	92.3	91.8	92.3	90.2	89.6	89.6	89.7	89.4	89.9	89.6	89.9	89.3	88.8
57	Plastics in primary forms (12/92 = 100)	93.8	93.8	93.9	94.0	93.7	93.0	93.9	93.9	94.0	94.3	95.5	95.4	95.3
58	Plastics in nonprimary forms (12/92 = 100)	77.9	78.9	79.4	79.7	79.3	79.0	80.4	80.3	80.8	80.8	81.5	80.9	80.8
59	Chemical materials and products, n.e.s.	98.1	98.6	98.4	99.5	100.0	101.6	100.6	100.0	100.9	99.7	100.2	100.3	101.4
6	**Manufactured goods classified chiefly by materials**	92.6	93.3	93.9	93.9	94.5	95.5	98.0	97.5	97.1	97.6	98.0	98.8	98.1
62	Rubber manufactures, n.e.s.	95.0	94.9	94.4	94.4	92.7	92.8	92.3	92.4	92.5	91.8	92.1	91.9	91.8
64	Paper, paperboard, and articles of paper, pulp, and paperboard	83.7	84.4	87.4	86.2	86.6	86.9	87.1	88.8	89.6	89.1	89.5	89.4	91.5
66	Nonmetallic mineral manufactures, n.e.s.	101.1	101.2	101.6	101.2	100.8	101.2	100.8	100.9	100.7	100.5	100.9	101.0	100.9
68	Nonferrous metals	91.1	94.8	95.4	95.6	98.9	104.4	115.1	110.3	106.9	110.7	112.5	118.6	114.8
69	Manufactures of metals, n.e.s.	95.8	95.6	95.9	95.9	95.7	96.1	96.1	95.9	95.9	95.7	95.8	95.7	95.7
7	**Machinery and transport equipment**	89.9	89.9	89.8	89.7	89.8	89.8	89.6	89.7	89.8	89.6	89.6	89.5	89.3
72	Machinery specialized for particular industries	97.6	97.8	98.2	97.8	97.7	97.9	97.3	97.1	97.0	96.1	96.7	96.6	95.9
74	General industrial machines and parts, n.e.s., and machine parts	97.4	97.3	97.3	97.0	97.0	96.7	97.0	96.9	96.7	96.2	96.7	96.4	96.0
75	Computer equipment and office machines	61.6	61.4	61.4	61.7	61.5	61.4	61.0	60.5	60.2	60.0	59.9	59.9	59.7
76	Telecommunications and sound recording and reproducing apparatus and equipment	87.1	86.0	85.9	85.6	85.2	85.2	84.9	84.5	84.7	84.6	84.2	84.2	84.2
77	Electrical machinery and equipment	82.5	82.6	82.2	82.1	82.4	82.2	82.2	83.0	83.5	83.3	82.9	82.8	82.8
78	Road vehicles	102.2	102.4	102.4	102.3	102.4	102.6	102.6	102.7	102.7	102.8	102.8	102.7	102.6
85	Footwear	100.8	100.8	100.8	100.8	100.8	100.9	100.7	100.5	100.7	100.3	100.9	101.0	100.9
88	Photographic apparatus, equipment, and supplies, and optical goods, n.e.s.	91.4	92.2	92.5	92.5	92.2	91.7	91.8	91.8	91.9	91.6	92.5	92.1	91.4

36. U.S. export price indexes by end-use category

[1995 = 100]

Category	1999				2000								
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
ALL COMMODITIES	94.8	95.1	95.3	95.2	95.4	95.8	96.3	96.2	96.4	96.3	96.3	96.0	96.5
Foods, feeds, and beverages	87.6	87.4	86.7	86.0	86.3	87.2	87.1	87.8	88.3	87.1	85.1	82.8	85.3
Agricultural foods, feeds, and beverages	86.7	86.4	85.6	84.9	85.4	86.0	86.2	87.1	87.7	86.2	84.0	81.3	84.3
Nonagricultural (fish, beverages) food products	98.2	99.7	99.2	99.5	98.3	100.9	97.8	97.0	96.6	98.1	97.9	99.7	98.1
Industrial supplies and materials	89.5	90.4	91.1	91.7	92.1	93.6	95.2	94.6	95.2	95.2	95.6	95.4	96.6
Agricultural industrial supplies and materials	76.6	77.5	76.6	76.7	75.2	76.9	77.7	78.2	78.2	78.2	77.9	80.3	81.8
Fuels and lubricants	111.8	114.4	115.9	120.4	122.7	131.3	143.6	127.8	132.9	135.6	141.2	137.9	155.4
Nonagricultural supplies and materials, excluding fuel and building materials	87.5	88.3	89.1	89.3	89.7	90.4	91.0	91.9	92.1	91.9	91.9	91.6	91.3
Selected building materials	87.4	87.8	87.7	88.6	89.2	89.5	90.1	90.4	90.0	89.9	89.6	90.5	89.4
Capital goods	96.1	96.2	96.3	96.0	96.1	96.0	96.0	96.1	96.1	96.1	96.1	96.1	96.1
Electric and electrical generating equipment	98.3	98.3	98.4	98.5	98.3	98.8	98.8	98.7	98.9	99.2	99.0	99.5	99.5
Nonelectrical machinery	92.4	92.4	92.5	92.1	92.1	91.9	91.8	91.9	91.9	91.7	91.6	91.6	91.5
Automotive vehicles, parts, and engines	103.3	104.0	103.9	103.8	103.9	103.8	104.2	104.2	104.2	104.1	104.4	104.4	104.4
Consumer goods, excluding automotive	101.9	102.2	102.2	102.4	102.4	102.5	102.3	102.4	102.4	102.3	102.4	102.4	102.1
Nondurables, manufactured	102.1	102.4	102.5	102.9	102.8	102.6	102.4	102.3	102.4	102.1	102.3	102.3	102.0
Durables, manufactured	100.7	100.8	100.9	100.8	101.0	101.4	101.0	101.3	101.3	101.3	101.5	101.4	101.4
Agricultural commodities	84.6	84.5	83.7	83.1	83.2	84.0	84.4	85.1	85.6	84.4	82.6	80.9	83.5
Nonagricultural commodities	95.9	96.3	96.6	96.6	96.8	97.2	97.6	97.4	97.7	97.6	97.8	97.7	98.0

37. U.S. import price indexes by end-use category

[1995 = 100]

Category	1999				2000								
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
ALL COMMODITIES	95.2	95.4	96.2	96.8	97.2	99.2	99.3	97.9	98.3	99.6	99.6	99.8	101.3
Foods, feeds, and beverages	92.3	91.6	93.0	94.8	93.6	93.3	92.5	93.3	91.9	91.1	91.1	91.5	90.9
Agricultural foods, feeds, and beverages	87.6	86.1	87.2	89.8	88.4	87.6	86.6	86.7	85.2	84.1	83.7	83.2	82.4
Nonagricultural (fish, beverages) food products	104.9	106.3	108.2	107.7	107.2	108.1	108.3	110.8	109.8	109.7	110.5	113.4	113.4
Industrial supplies and materials	103.1	104.3	106.9	109.4	111.0	118.6	119.8	114.3	115.9	121.8	121.7	122.4	128.9
Fuels and lubricants	126.0	128.1	134.3	140.7	144.2	164.7	163.7	147.7	153.3	170.6	169.0	170.0	191.4
Petroleum and petroleum products	125.2	127.3	132.5	140.9	145.8	167.5	166.2	147.4	154.0	170.4	167.7	167.8	191.5
Paper and paper base stocks	78.4	78.5	81.8	81.2	82.1	82.8	83.1	85.6	86.8	87.0	87.5	87.6	89.9
Materials associated with nondurable supplies and materials	87.7	88.3	88.8	89.1	89.2	89.7	90.4	91.2	92.1	91.7	92.7	92.8	92.3
Selected building materials	113.4	110.0	108.3	111.1	110.5	110.1	112.1	111.9	109.1	105.0	103.4	100.2	98.6
Unfinished metals associated with durable goods	89.7	93.0	94.4	94.8	97.4	100.3	107.1	104.3	102.0	105.0	106.5	109.5	106.2
Nonmetals associated with durable goods	87.3	87.5	87.5	87.4	87.2	88.0	87.6	87.8	87.8	87.0	87.7	87.5	87.2
Capital goods	82.0	81.9	81.8	81.7	81.7	81.6	81.3	81.4	81.2	80.9	80.9	80.7	80.6
Electric and electrical generating equipment	91.6	91.7	91.8	91.1	91.8	91.8	92.1	93.9	94.2	94.3	94.1	93.7	93.5
Nonelectrical machinery	78.8	78.6	78.5	78.4	78.3	78.2	77.9	77.7	77.5	77.1	77.1	77.0	76.8
Automotive vehicles, parts, and engines	101.9	102.0	102.0	102.0	102.1	102.2	102.2	102.3	102.6	102.7	102.9	102.7	102.5
Consumer goods, excluding automotive	97.7	97.5	97.6	97.5	97.5	97.4	97.1	97.1	97.0	96.5	96.8	96.8	96.7
Nondurables, manufactured	100.8	100.5	100.7	100.6	100.4	100.4	100.3	100.3	100.1	99.5	99.8	100.0	99.8
Durables, manufactured	94.2	94.1	94.2	94.1	94.1	93.8	93.5	93.4	93.4	93.2	93.4	93.2	93.1
Nonmanufactured consumer goods	99.9	100.0	98.8	99.8	101.5	102.0	100.1	100.3	99.7	98.0	99.5	99.2	99.6

38. U.S. international price indexes for selected categories of services

[1990 = 100, unless otherwise indicated]

Category	1998	1999				2000		
	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.
Air freight (inbound) (9/90 = 100)	87.4	88.0	86.2	87.9	90.7	88.9	88.4	88.5
Air freight (outbound) (9/92 = 100)	95.2	92.7	92.8	92.7	91.7	91.7	92.8	92.6
Air passenger fares (U.S. carriers)	103.1	104.5	112.3	114.2	106.8	107.3	113.3	115.5
Air passenger fares (foreign carriers)	101.1	98.9	106.3	108.6	102.2	102.6	107.9	109.1
Ocean liner freight (inbound)	104.2	102.6	133.7	148.0	139.4	136.3	143.0	142.8

39. Indexes of productivity, hourly compensation, and unit costs, quarterly data seasonally adjusted

[1992 = 100]

Item	Quarterly indexes												
	1997			1998				1999				2000	
	II	III	IV	I	II	III	IV	I	II	III	IV	I	II
Business													
Output per hour of all persons	107.3	108.3	108.5	109.7	110.0	110.6	111.6	112.6	112.8	114.2	116.3	116.7	118.6
Compensation per hour	112.3	113.5	115.3	117.1	118.5	120.0	121.4	123.0	124.5	126.1	127.3	128.4	130.4
Real compensation per hour	99.8	100.4	101.5	102.9	103.8	104.7	105.5	106.4	106.9	107.6	107.8	107.7	108.5
Unit labor costs	104.7	104.8	106.3	106.7	107.7	108.5	108.8	109.3	110.4	110.5	109.5	110.0	110.0
Unit nonlabor payments	118.0	118.5	116.8	116.4	115.1	114.6	114.6	115.1	114.1	114.3	116.8	118.2	120.2
Implicit price deflator	109.6	109.9	110.2	110.3	110.5	110.7	110.9	111.4	111.8	111.9	112.2	113.0	113.7
Nonfarm business													
Output per hour of all persons	107.1	108.0	108.1	109.3	109.8	110.3	111.2	112.0	112.1	113.6	115.8	116.3	118.0
Compensation per hour	112.0	113.0	114.7	116.4	117.9	119.4	120.8	122.1	123.6	125.2	126.5	127.8	129.4
Real compensation per hour	99.5	100.0	101.0	102.3	103.2	104.2	104.9	105.7	106.1	106.8	107.2	107.2	107.7
Unit labor costs	104.5	104.7	106.1	106.5	107.5	108.3	108.5	109.0	110.2	110.3	109.3	109.8	109.7
Unit nonlabor payments	118.8	119.5	117.8	117.4	116.3	115.8	115.8	116.7	115.7	116.1	118.6	120.1	122.1
Implicit price deflator	109.7	110.1	110.4	110.5	110.7	111.0	111.2	111.8	112.2	112.4	112.7	113.6	114.2
Nonfinancial corporations													
Output per hour of all employees	109.3	110.8	111.6	112.3	113.4	114.9	115.8	117.1	118.2	119.7	121.5	122.3	123.8
Compensation per hour	111.1	112.1	113.7	115.2	116.6	118.0	119.3	120.9	122.4	124.0	125.3	126.1	127.8
Real compensation per hour	98.7	99.2	100.1	101.2	102.1	103.0	103.7	104.6	105.1	105.8	106.1	105.8	106.3
Total unit costs	101.6	101.1	101.5	102.0	102.3	102.1	102.6	102.5	103.0	103.2	103.0	103.1	103.4
Unit labor costs	101.6	101.2	101.9	102.6	102.8	102.7	103.0	103.2	103.5	103.6	103.1	103.1	103.2
Unit nonlabor costs	101.4	100.8	100.4	100.5	100.9	100.2	101.6	100.7	101.4	102.1	102.5	103.3	103.8
Unit profits	155.3	160.3	156.5	150.4	147.2	151.4	144.5	149.7	147.5	143.3	145.7	150.9	155.7
Unit nonlabor payments	115.1	116.0	114.7	113.2	112.7	113.3	112.5	113.2	113.2	112.6	113.5	115.4	117.0
Implicit price deflator	106.1	106.1	106.1	106.1	106.1	106.2	106.2	106.5	106.7	106.6	106.6	107.2	107.8
Manufacturing													
Output per hour of all persons	116.3	118.7	120.1	121.3	122.7	125.1	126.8	128.9	130.4	131.9	135.1	137.7	139.5
Compensation per hour	110.5	111.5	113.3	115.2	116.6	118.1	119.4	120.7	122.4	124.1	125.5	127.0	128.0
Real compensation per hour	98.1	98.6	99.8	101.2	102.1	103.0	103.7	104.4	105.1	105.9	106.4	106.5	106.5
Unit labor costs	95.0	93.9	94.4	95.0	95.1	94.4	94.1	93.6	93.8	94.1	92.9	92.2	91.7

– Data not available.

40. Annual indexes of multifactor productivity and related measures, selected years

[1996 = 100, unless otherwise indicated]

Item	1960	1970	1980	1990	1991	1992	1993	1994	1995	1996	1997	1998
Private business												
Productivity:												
Output per hour of all persons	45.6	63.0	75.8	90.2	91.3	94.8	95.4	96.6	97.3	100.0	102.0	104.8
Output per unit of capital services	110.4	111.1	101.5	99.3	96.1	97.7	98.5	100.3	99.7	100.0	100.5	100.1
Multifactor productivity	65.2	80.0	88.3	95.3	94.4	96.6	97.1	98.1	98.4	100.0	101.1	102.6
Output	27.5	42.0	59.4	83.6	82.6	85.7	88.5	92.8	95.8	100.0	105.2	110.6
Inputs:												
Labor input	54.0	61.0	71.9	89.4	88.3	89.3	91.8	95.6	98.0	100.0	103.7	106.4
Capital services	24.9	37.8	58.6	84.2	86.0	87.7	89.8	92.6	96.0	100.0	104.7	110.4
Combined units of labor and capital input	42.3	52.4	67.3	87.7	87.5	88.8	91.1	94.6	97.3	100.0	104.0	107.7
Capital per hour of all persons	41.3	56.7	74.7	90.8	95.0	97.0	96.8	96.3	97.6	100.0	101.5	104.7
Private nonfarm business												
Productivity:												
Output per hour of all persons	48.7	64.9	77.3	90.3	91.4	94.8	95.3	96.5	97.5	100.0	101.7	104.5
Output per unit of capital services	120.1	118.3	105.7	100.0	96.6	97.9	98.8	100.3	99.9	100.0	100.2	99.8
Multifactor productivity	69.1	82.6	90.5	95.6	94.7	96.6	97.1	98.1	98.6	100.0	100.9	102.4
Output	27.2	41.9	59.6	83.5	82.5	85.5	88.4	92.6	95.8	100.0	105.1	110.6
Inputs:												
Labor input	50.1	59.3	70.7	89.2	88.0	89.0	91.8	95.4	97.8	100.0	103.8	106.6
Capital services	22.6	35.5	56.4	83.5	85.4	87.3	89.5	92.3	95.9	100.0	104.9	110.8
Combined units of labor and capital input	39.3	50.7	65.9	87.3	87.1	88.4	91.0	94.4	97.2	100.0	104.2	108.0
Capital per hour of all persons	40.5	54.8	73.1	90.3	94.7	96.8	96.5	96.3	97.6	100.0	101.5	104.7
Manufacturing (1992 = 100)												
Productivity:												
Output per hour of all persons	41.8	54.2	70.1	92.8	95.0	100.0	101.9	105.0	109.0	112.8	117.1	124.3
Output per unit of capital services	124.3	116.5	100.9	101.6	97.5	100.0	101.1	104.0	105.0	104.5	105.6	106.5
Multifactor productivity	72.7	84.4	86.6	99.3	98.3	100.0	100.4	102.6	105.0	106.1	109.8	113.2
Output	38.5	56.5	75.3	97.3	95.4	100.0	103.3	108.7	113.4	116.9	123.5	130.7
Inputs:												
Hours of all persons	92.0	104.2	107.5	104.8	100.4	100.0	101.4	103.6	104.0	103.7	105.5	105.2
Capital services	30.9	48.5	74.7	95.8	97.9	100.0	102.2	104.5	108.0	111.9	116.9	122.8
Energy	51.3	85.4	92.5	99.9	100.1	100.0	103.7	107.3	109.5	107.0	103.9	109.2
Nonenergy materials	38.2	44.8	75.0	92.5	93.6	100.0	105.7	111.3	112.8	120.4	120.4	127.2
Purchased business services	28.2	48.8	73.7	92.5	92.1	100.0	103.0	105.1	110.0	108.9	114.2	116.8
Combined units of all factor inputs	52.9	67.0	87.0	98.0	97.0	100.0	102.9	106.0	107.9	110.2	112.5	115.5

– Data not available.

41. Annual indexes of productivity, hourly compensation, unit costs, and prices, selected years

[1992 = 100]

Item	1960	1970	1980	1989	1990	1991	1993	1994	1995	1996	1997	1998	1999
Business													
Output per hour of all persons	48.8	67.0	80.4	93.9	95.2	96.3	100.5	101.9	102.6	105.4	107.6	110.5	114.0
Compensation per hour	13.7	23.5	54.2	85.8	90.7	95.0	102.5	104.5	106.7	110.1	113.3	119.3	125.2
Real compensation per hour	60.0	78.9	89.5	95.9	96.5	97.5	99.9	99.7	99.3	99.7	100.4	104.3	107.3
Unit labor costs	28.0	35.1	67.4	91.3	95.3	98.7	101.9	102.6	104.1	104.5	105.3	107.9	109.9
Unit nonlabor payments	25.2	31.6	61.5	91.8	93.9	97.0	102.5	106.4	109.4	113.3	117.1	115.2	115.1
Implicit price deflator	27.0	33.9	65.2	91.5	94.8	98.1	102.2	104.0	106.0	107.7	109.7	110.6	111.8
Nonfarm business													
Output per hour of all persons	51.9	68.9	82.0	94.2	95.3	96.4	100.5	101.8	102.8	105.4	107.3	110.2	113.4
Compensation per hour	14.3	23.7	54.6	85.8	90.5	95.0	102.2	104.3	106.6	109.8	112.9	118.6	124.4
Real compensation per hour	62.8	79.5	90.0	95.9	96.3	97.5	99.6	99.5	99.2	99.5	100.0	103.8	106.5
Unit labor costs	27.5	34.4	66.5	91.1	95.0	98.5	101.7	102.5	103.7	104.2	105.1	107.7	109.7
Unit nonlabor payments	24.6	31.3	60.5	91.3	93.6	97.1	103.0	106.9	110.4	113.5	118.0	116.3	116.8
Implicit price deflator	26.5	33.3	64.3	91.2	94.5	98.0	102.2	104.1	106.1	107.6	109.8	110.8	112.3
Nonfinancial corporations													
Output per hour of all employees	55.4	70.4	81.1	94.6	95.4	97.6	100.8	103.2	104.3	107.6	110.2	114.2	119.2
Compensation per hour	15.6	25.3	56.4	86.2	90.8	95.2	102.1	104.3	106.2	109.1	112.0	117.4	123.2
Real compensation per hour	68.3	84.7	93.1	96.3	96.6	97.8	99.6	99.5	98.9	98.8	99.3	102.7	105.5
Total unit costs	26.8	34.8	68.4	92.0	95.9	98.8	101.0	101.1	102.0	101.2	101.4	102.2	102.9
Unit labor costs	28.1	35.9	69.6	91.1	95.2	97.5	101.3	101.0	101.9	101.4	101.6	102.8	103.4
Unit nonlabor costs	23.3	31.9	65.1	94.6	98.0	102.1	100.2	101.3	102.2	100.6	100.8	100.8	101.7
Unit profits	50.2	44.4	68.8	97.3	94.3	93.0	113.2	131.7	139.0	152.2	156.7	148.3	146.5
Unit nonlabor payments	30.2	35.1	66.0	95.3	97.1	99.7	103.5	109.0	111.6	113.8	115.0	112.9	113.1
Implicit price deflator	28.8	35.6	68.4	92.5	95.8	98.3	102.1	103.7	105.1	105.5	106.1	106.1	106.6
Manufacturing													
Output per hour of all persons	41.9	54.3	70.3	90.5	92.9	95.0	102.0	105.2	109.3	113.1	117.6	123.9	131.6
Compensation per hour	14.9	23.7	55.6	86.6	90.8	95.6	102.7	105.6	107.9	109.3	111.4	117.3	123.2
Real compensation per hour	65.2	79.5	91.7	96.8	96.6	98.1	100.2	100.8	100.4	99.0	98.8	102.6	105.5
Unit labor costs	35.5	43.7	79.1	95.8	97.7	100.6	100.7	100.4	98.7	96.6	94.8	94.6	93.6
Unit nonlabor payments	26.8	29.4	80.2	95.4	99.6	98.9	101.0	102.9	107.2	110.1	109.7	104.6	–
Implicit price deflator	30.2	34.9	79.8	95.5	98.9	99.6	100.9	101.9	103.9	104.9	103.9	100.7	–

– Data not available.

42. Annual indexes of output per hour for selected 3-digit SIC industries

[1987 = 100]

Industry	SIC	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Mining												
Copper ores	102	109.2	106.6	102.7	100.5	115.2	118.1	126.0	117.2	116.5	118.9	117.5
Gold and silver ores	104	101.5	113.3	122.3	127.4	141.6	159.8	160.8	144.2	138.3	159.0	186.3
Bituminous coal and lignite mining	122	111.7	117.3	118.7	122.4	133.0	141.2	148.1	155.9	168.0	176.6	187.3
Crude petroleum and natural gas	131	101.0	98.0	97.0	97.9	102.1	105.9	112.4	119.4	123.9	125.2	128.7
Crushed and broken stone	142	101.3	98.7	102.2	99.8	105.0	103.6	108.7	105.4	107.2	114.0	111.9
Manufacturing												
Meat products	201	100.1	99.2	97.1	99.6	104.6	104.3	101.2	102.3	97.4	103.2	-
Dairy products	202	108.4	107.7	107.3	108.3	111.4	109.6	111.8	116.4	116.0	119.5	-
Preserved fruits and vegetables	203	97.0	97.8	95.6	99.2	100.5	106.8	107.6	109.1	109.2	111.8	-
Grain mill products	204	101.3	107.6	105.4	104.9	107.8	109.2	108.4	115.4	108.0	118.7	-
Bakery products	205	96.8	96.1	92.7	90.6	93.8	94.4	96.4	97.3	95.6	99.3	-
Sugar and confectionery products	206	99.5	101.8	103.2	102.0	99.8	104.5	106.2	108.3	113.8	117.1	-
Fats and oils	207	108.9	116.4	118.1	120.1	114.1	112.6	111.8	120.3	110.1	120.0	-
Beverages	208	106.0	112.7	117.7	120.5	127.6	127.0	130.8	134.3	135.7	136.3	-
Miscellaneous food and kindred products	209	107.0	99.3	99.3	101.6	101.6	105.3	101.0	103.1	109.2	103.9	-
Cigarettes	211	101.2	109.0	113.2	107.6	111.6	106.5	126.6	142.9	147.2	147.2	-
Broadwoven fabric mills, cotton	221	99.6	99.8	103.1	111.2	110.3	117.8	122.1	134.0	137.3	130.9	-
Broadwoven fabric mills, manmade	222	99.2	106.3	111.3	116.2	126.2	131.7	142.5	145.3	147.6	161.9	-
Narrow fabric mills	224	108.4	92.7	96.5	99.6	112.9	111.4	120.1	118.9	126.3	107.7	-
Knitting mills	225	96.3	108.0	107.5	114.1	119.5	128.1	134.3	138.6	150.5	150.2	-
Textile finishing, except wool	226	90.3	88.7	83.4	79.9	78.6	79.3	81.2	78.5	79.2	94.0	-
Carpets and rugs	227	98.6	97.8	93.2	89.2	96.1	97.1	93.3	95.8	100.2	100.3	-
Yarn and thread mills	228	102.1	104.2	110.2	111.4	119.6	126.6	130.7	137.4	147.4	155.5	-
Miscellaneous textile goods	229	101.6	109.1	109.2	104.6	106.5	110.4	118.5	123.7	123.1	117.9	-
Men's and boys' suits and coats	231	105.1	97.7	93.9	90.2	89.0	97.4	97.7	92.5	97.4	130.3	-
Men's and boys' furnishings	232	100.1	100.1	102.1	108.4	109.1	108.4	111.7	123.4	134.7	152.4	-
Women's and misses' outerwear	233	101.4	96.8	104.1	104.3	109.4	121.8	127.4	135.5	141.6	151.5	-
Women's and children's undergarments	234	105.4	94.6	102.1	113.6	117.4	124.5	138.0	161.3	174.5	196.3	-
Hats, caps, and millinery	235	99.0	96.4	89.2	91.1	93.6	87.2	77.7	84.3	82.2	83.5	-
Miscellaneous apparel and accessories	238	101.3	88.4	90.6	91.8	91.3	94.0	105.5	116.8	120.1	105.2	-
Miscellaneous fabricated textile products	239	96.6	95.7	99.9	100.7	107.5	108.5	107.8	109.2	105.6	117.0	-
Logging	241	93.7	89.4	86.3	86.0	96.2	88.6	87.8	86.0	85.4	71.9	-
Sawmills and planing mills	242	100.7	99.6	99.8	102.6	108.1	101.9	103.3	110.2	115.6	117.5	-
Millwork, plywood, and structural members	243	98.8	97.1	98.0	98.0	99.9	97.0	94.5	92.7	92.4	89.9	-
Wood containers	244	103.1	108.8	111.2	113.1	109.4	100.1	100.9	106.1	106.7	106.6	-
Wood buildings and mobile homes	245	97.8	98.8	103.1	103.0	103.1	103.8	98.3	97.0	96.7	101.1	-
Miscellaneous wood products	249	95.9	102.4	107.7	110.5	114.2	115.3	111.8	115.4	114.4	123.1	-
Household furniture	251	99.4	102.0	104.5	107.1	110.5	110.6	112.5	116.9	121.6	121.8	-
Office furniture	252	94.3	97.5	95.0	94.1	102.5	103.2	100.5	101.1	106.4	117.9	-
Public building and related furniture	253	109.6	113.7	119.8	120.2	140.6	161.0	157.4	173.3	181.5	186.5	-
Partitions and fixtures	254	95.7	92.4	95.6	93.0	102.7	107.4	98.9	101.2	97.5	121.4	-
Miscellaneous furniture and fixtures	259	103.6	101.9	103.5	102.1	99.5	103.6	104.7	110.0	113.2	102.2	-
Pulp mills	261	99.6	107.4	116.7	128.3	137.3	122.5	128.9	131.9	132.6	104.4	-
Paper mills	262	103.9	103.6	102.3	99.2	103.3	102.4	110.2	118.6	111.6	107.0	-
Paperboard mills	263	105.5	101.9	100.6	101.4	104.4	108.4	114.9	119.5	118.0	124.2	-
Paperboard containers and boxes	265	99.7	101.5	101.3	103.4	105.2	107.9	108.4	105.1	106.3	110.1	-
Miscellaneous converted paper products	267	101.1	101.6	101.4	105.3	105.5	107.9	110.6	113.3	113.6	121.7	-
Newspapers	271	96.9	95.2	90.6	85.8	81.5	79.4	79.9	79.0	77.4	79.0	-
Periodicals	272	97.9	98.3	93.9	89.5	92.9	89.5	81.9	87.8	89.1	100.1	-
Books	273	99.1	94.1	96.6	100.8	97.7	103.5	103.0	101.6	99.3	102.2	-
Miscellaneous publishing	274	96.7	89.0	92.2	95.9	105.8	104.5	97.5	94.8	93.6	114.5	-
Commercial printing	275	100.0	101.1	102.5	102.0	108.0	106.9	106.5	107.2	108.3	109.2	-
Manifold business forms	276	98.7	89.7	93.0	89.1	94.5	91.1	82.0	76.9	75.2	78.9	-
Greeting cards	277	100.1	109.1	100.6	92.7	96.7	91.4	89.0	92.5	90.8	92.2	-
Blankbooks and bookbinding	278	95.6	94.2	99.4	96.1	103.6	98.7	105.4	108.7	114.5	115.3	-
Printing trade services	279	99.9	94.3	99.3	100.6	112.0	115.3	111.0	116.7	126.2	124.2	-
Industrial inorganic chemicals	281	105.7	104.3	106.8	109.7	109.7	105.6	102.3	109.3	110.1	116.1	-
Plastics materials and synthetics	282	98.8	99.7	100.9	100.0	107.5	112.0	125.3	128.3	125.3	133.8	-
Drugs	283	101.0	102.8	103.8	104.5	99.5	99.9	104.9	108.7	112.1	112.6	-
Soaps, cleaners, and toilet goods	284	102.0	100.6	103.8	105.3	104.4	108.7	111.2	118.6	120.9	130.4	-
Paints and allied products	285	101.4	103.3	106.3	104.3	102.9	108.8	116.7	118.0	125.6	127.2	-

See footnotes at end of table.

42. Continued--Annual indexes of output per hour for selected 3-digit SIC industries

[1987 = 100]

Industry	SIC	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Industrial organic chemicals	286	109.9	110.4	101.4	95.8	94.6	92.2	99.9	98.6	99.0	112.9	-
Agricultural chemicals	287	103.7	104.3	104.7	99.5	99.5	103.8	105.0	108.5	110.0	120.4	-
Miscellaneous chemical products	289	95.4	95.2	97.3	96.1	101.8	107.1	105.7	107.8	110.1	120.2	-
Petroleum refining	291	105.3	109.6	109.2	106.6	111.3	120.1	123.8	132.3	142.0	149.2	-
Asphalt paving and roofing materials	295	98.3	95.3	98.0	94.1	100.4	108.0	104.9	111.2	113.1	120.8	-
Miscellaneous petroleum and coal products	299	98.4	101.9	94.8	90.6	101.5	104.2	96.3	87.4	87.1	97.2	-
Tires and inner tubes	301	102.9	103.8	103.0	102.4	107.8	116.5	124.1	131.1	138.8	148.5	-
Hose and belting and gaskets and packing	305	103.7	96.3	96.1	92.4	97.8	99.7	102.7	104.6	107.4	112.5	-
Fabricated rubber products, n.e.c.	306	104.2	105.5	109.0	109.9	115.2	123.1	119.1	121.5	121.0	125.4	-
Miscellaneous plastics products, n.e.c.	308	100.5	101.8	105.7	108.2	114.4	116.7	120.7	120.9	124.7	130.1	-
Footwear, except rubber	314	101.3	101.1	101.1	94.4	104.2	105.2	113.0	117.1	126.1	129.5	-
Luggage	316	93.7	104.8	106.2	100.3	90.7	89.5	92.3	90.5	110.6	136.4	-
Handbags and personal leather goods	317	98.5	93.1	96.5	98.7	111.2	97.8	86.8	81.8	83.2	109.7	-
Flat glass	321	91.9	90.7	84.5	83.6	92.7	97.7	97.6	99.6	101.5	107.6	-
Glass and glassware, pressed or blown	322	100.6	100.2	104.8	102.3	108.9	108.7	112.9	115.7	121.4	128.2	-
Products of purchased glass	323	95.9	90.1	92.6	97.7	101.5	106.2	105.9	106.1	122.0	125.3	-
Cement, hydraulic	324	103.2	110.2	112.4	108.3	115.1	119.9	125.6	124.3	128.7	133.1	-
Structural clay products	325	98.8	103.1	109.6	109.8	111.4	106.8	114.0	112.6	119.6	116.1	-
Pottery and related products	326	99.6	97.1	98.6	95.8	99.5	100.3	108.4	109.3	119.3	116.1	-
Concrete, gypsum, and plaster products	327	100.8	102.4	102.3	101.2	102.5	104.6	101.5	104.5	107.3	109.2	-
Miscellaneous nonmetallic mineral products	329	103.0	95.5	95.4	94.0	104.3	104.5	106.3	107.8	110.4	112.7	-
Blast furnace and basic steel products	331	112.6	108.0	109.6	107.8	117.1	133.5	142.4	142.7	155.1	160.9	-
Iron and steel foundries	332	104.0	105.4	106.1	104.5	107.2	112.1	113.0	112.7	116.2	121.7	-
Primary nonferrous metals	333	107.8	106.1	102.3	110.7	101.9	107.9	105.3	111.0	110.8	116.0	-
Nonferrous rolling and drawing	335	95.5	93.6	92.7	91.0	96.0	98.3	101.2	99.2	104.0	112.3	-
Nonferrous foundries (castings)	336	102.6	105.1	104.0	103.6	103.6	108.5	112.1	117.8	122.3	126.4	-
Miscellaneous primary metal products	339	106.6	105.0	113.7	109.1	114.5	111.3	134.5	152.2	149.6	140.9	-
Metal cans and shipping containers	341	106.5	108.5	117.6	122.9	127.8	132.3	140.9	144.2	155.2	160.8	-
Cutlery, handtools, and hardware	342	97.8	101.7	97.3	96.8	100.1	104.0	109.2	111.3	118.2	113.1	-
Plumbing and heating, except electric	343	103.7	101.5	102.6	102.0	98.4	102.0	109.1	109.2	118.6	127.2	-
Fabricated structural metal products	344	100.4	96.9	98.8	100.0	103.9	104.8	107.7	105.8	106.5	110.0	-
Screw machine products, bolts, etc.	345	98.5	96.1	96.1	97.9	102.3	104.4	107.2	109.7	110.2	151.3	-
Metal forgings and stampings	346	101.5	99.8	95.6	92.9	103.7	108.7	108.5	109.3	113.6	120.2	-
Metal services, n.e.c.	347	108.3	102.4	104.7	99.4	111.6	120.6	123.0	127.7	128.4	123.5	-
Ordnance and accessories, n.e.c.	348	97.7	89.8	82.1	81.5	88.6	84.6	83.6	87.6	87.5	100.5	-
Miscellaneous fabricated metal products	349	101.4	95.9	97.5	97.4	101.1	102.0	103.2	106.6	108.3	106.2	-
Engines and turbines	351	106.8	110.7	106.5	105.8	103.3	109.2	122.3	122.7	136.6	134.2	-
Farm and garden machinery	352	106.3	110.7	116.5	112.9	113.9	118.6	125.0	134.7	137.2	141.0	-
Construction and related machinery	353	106.5	108.3	107.0	99.1	102.0	108.2	117.7	122.1	123.3	131.8	-
Metalworking machinery	354	101.0	103.5	101.1	96.4	104.3	107.4	109.9	114.8	114.9	118.6	-
Special industry machinery	355	104.6	108.3	107.5	108.3	106.0	113.6	121.2	132.3	134.0	130.1	-
General industrial machinery	356	105.9	101.5	101.5	101.6	101.6	104.8	106.7	109.0	109.4	110.1	-
Refrigeration and service machinery	358	102.1	106.0	103.6	100.7	104.9	108.6	110.7	112.7	114.7	114.8	-
Industrial machinery, n.e.c.	359	106.5	107.1	107.3	109.0	117.0	118.5	127.4	138.8	141.4	129.7	-
Electric distribution equipment	361	105.4	105.0	106.3	106.5	119.6	122.2	131.8	143.0	143.9	143.9	-
Electrical industrial apparatus	362	104.6	107.4	107.7	107.1	117.1	132.9	134.9	150.8	154.3	163.9	-
Household appliances	363	103.0	104.7	105.8	106.5	115.0	123.4	131.4	127.3	127.4	138.1	-
Electric lighting and wiring equipment	364	101.9	100.2	99.9	97.5	105.7	107.8	113.4	113.7	116.9	121.4	-
Communications equipment	366	110.5	107.2	121.4	124.5	146.7	150.3	166.0	170.9	190.3	221.0	-
Miscellaneous electrical equipment & supplies	369	102.8	99.6	90.6	98.6	101.3	108.2	110.5	114.1	123.1	124.6	-
Motor vehicles and equipment	371	103.2	103.3	102.4	96.6	104.2	106.2	108.8	106.7	107.2	116.5	-
Aircraft and parts	372	100.6	98.2	98.9	108.2	112.4	115.2	109.6	107.8	113.0	114.0	-
Ship and boat building and repairing	373	99.4	97.6	103.7	96.3	102.7	106.2	103.8	98.0	99.2	104.3	-
Railroad equipment	374	113.5	135.3	141.1	146.9	147.9	151.0	152.5	150.0	148.3	183.2	-
Motorcycles, bicycles, and parts	375	92.6	94.6	93.8	99.8	108.4	130.9	125.1	120.3	125.5	120.5	-
Guided missiles, space vehicles, parts	376	104.1	110.6	116.5	110.5	110.5	122.1	118.9	121.0	129.4	126.6	-
Search and navigation equipment	381	104.8	105.8	112.7	118.9	122.1	129.1	132.1	149.5	142.2	148.9	-
Measuring and controlling devices	382	103.9	102.1	107.0	113.9	121.0	125.2	135.0	147.8	151.9	144.3	-
Medical instruments and supplies	384	105.2	107.9	116.9	118.7	123.5	127.3	126.7	131.5	139.8	146.3	-
Ophthalmic goods	385	112.6	123.3	121.2	125.1	144.5	157.8	160.6	167.2	188.2	202.6	-
Photographic equipment & supplies	386	105.6	113.0	107.8	110.2	116.4	126.9	132.7	129.5	128.7	121.6	-

See footnotes at end of table.

42. Continued--Annual indexes of output per hour for selected 3-digit SIC industries

[1987 = 100]

Industry	SIC	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Jewelry, silverware, and plated ware	391	100.1	102.9	99.3	95.8	96.7	96.7	99.5	100.2	102.6	117.2	-
Musical instruments	393	101.8	96.1	97.1	96.9	96.0	95.6	88.7	86.9	78.8	83.9	-
Toys and sporting goods	394	104.8	106.0	108.1	109.7	104.9	114.2	109.7	113.6	119.9	139.6	-
Pens, pencils, office, and art supplies	395	108.3	112.9	118.2	116.8	111.3	111.6	129.9	135.2	144.1	127.7	-
Costume jewelry and notions	396	102.0	93.8	105.3	106.7	110.8	115.8	129.0	143.7	142.2	119.1	-
Miscellaneous manufactures	399	102.1	100.9	106.5	109.2	109.5	107.7	106.1	108.1	112.8	109.3	-
Transportation												
Trucking, except local	4213	105.2	109.3	111.1	116.9	123.4	126.6	129.5	125.4	130.9	132.4	130.1
U.S. postal service	431	99.9	99.7	104.0	103.7	104.5	107.1	106.6	106.5	104.7	108.3	109.5
Air transportation	4512,13,22 (pts.)	99.5	95.8	92.9	92.5	96.9	100.2	105.7	108.6	111.6	111.1	108.5
Utilities												
Telephone communications	481	106.2	111.6	113.3	119.8	127.7	135.5	142.2	148.1	159.5	160.9	171.2
Radio and television broadcasting	483	103.1	106.2	104.9	106.1	108.3	106.7	110.1	109.6	105.8	101.1	100.8
Cable and other pay TV services	484	102.0	99.7	92.5	87.5	88.3	86.7	85.6	86.7	84.4	87.6	88.0
Electric utilities	491,3 (pt.)	104.9	107.7	110.1	113.4	115.2	120.6	126.8	135.0	150.5	146.5	157.2
Gas utilities	492,3 (pt.)	108.3	111.2	105.8	109.6	111.1	121.8	125.6	137.1	158.6	145.9	153.4
Trade												
Lumber and other building materials dealers	521	101.0	99.1	103.6	101.3	105.4	110.5	118.3	117.6	121.7	122.2	133.0
Paint, glass, and wallpaper stores	523	102.8	101.7	106.0	99.4	106.5	114.7	130.2	135.3	140.2	143.8	166.0
Hardware stores	525	108.6	115.2	110.5	102.5	107.2	105.8	112.7	108.5	112.1	111.2	125.3
Retail nurseries, lawn and garden supply stores	526	106.7	103.4	83.9	88.5	100.4	106.6	116.6	117.2	136.6	128.1	136.1
Department stores	531	99.2	97.0	94.2	98.2	100.9	105.7	108.6	110.9	118.4	123.5	129.4
Variety stores	533	101.9	124.4	151.2	154.2	167.7	184.7	190.1	203.2	229.2	247.6	262.5
Miscellaneous general merchandise stores	539	100.8	109.8	116.4	121.8	136.1	159.7	160.9	163.9	164.9	168.2	189.9
Grocery stores	541	98.9	95.4	94.6	93.7	93.3	92.8	92.5	91.2	89.4	89.2	90.2
Meat and fish (seafood) markets	542	99.0	97.6	96.8	88.4	95.8	93.7	91.1	89.1	81.1	84.7	89.9
Retail bakeries	546	89.8	83.3	89.7	94.7	94.0	86.5	87.2	86.8	81.7	75.4	65.0
New and used car dealers	551	103.4	102.5	106.1	104.1	106.5	107.6	108.7	107.1	108.2	107.8	108.0
Auto and home supply stores	553	103.2	101.6	102.7	99.0	100.0	98.7	102.6	105.7	104.6	104.2	107.0
Gasoline service stations	554	103.0	105.2	102.6	104.3	109.7	115.2	120.4	126.3	125.1	125.0	130.6
Men's and boys' wear stores	561	106.0	109.6	113.7	119.2	118.2	115.5	117.9	117.5	125.7	132.2	145.5
Women's clothing stores	562	97.8	99.5	101.5	103.0	112.2	118.4	119.3	128.5	142.3	145.8	154.8
Family clothing stores	565	102.0	104.9	104.5	106.4	111.7	114.5	120.4	133.8	138.8	142.1	145.6
Shoe stores	566	102.7	107.2	106.1	105.1	111.5	113.2	126.3	134.5	146.9	143.5	136.4
Miscellaneous apparel and accessory stores	569	96.3	95.2	88.6	78.8	89.1	92.9	100.4	122.1	127.1	118.1	131.0
Furniture and homefurnishings stores	571	98.6	100.9	101.8	101.5	108.4	107.6	108.8	112.0	118.6	119.4	121.6
Household appliance stores	572	98.5	103.5	102.8	105.2	113.9	117.0	121.2	138.7	141.8	155.5	184.5
Radio, television, computer, and music stores	573	118.6	114.6	119.6	128.3	137.8	152.7	177.0	196.7	204.6	215.1	258.9
Eating and drinking places	581	102.8	102.2	104.0	103.1	102.5	102.8	101.1	100.9	99.5	100.5	101.1
Drug and proprietary stores	591	101.9	102.5	103.6	104.7	103.6	105.4	105.7	106.9	109.6	115.4	117.7
Liquor stores	592	98.2	101.1	105.2	105.9	108.4	100.7	99.1	103.7	112.8	108.9	113.9
Used merchandise stores	593	105.3	104.9	100.3	98.6	110.4	112.1	115.4	117.3	129.8	138.0	158.4
Miscellaneous shopping goods stores	594	100.7	104.2	104.2	105.0	102.7	106.5	111.9	117.8	120.0	123.7	131.5
Nonstore retailers	596	105.6	110.8	108.8	109.3	122.1	127.5	143.3	146.1	165.5	177.2	193.5
Fuel dealers	598	95.6	92.0	84.4	85.3	84.4	92.7	100.7	114.2	115.8	113.4	112.0
Retail stores, n.e.c.	599	105.9	103.1	113.7	103.2	111.6	117.3	125.0	126.2	139.5	147.3	157.6
Finance and services												
Commercial banks	602	102.8	104.8	107.7	110.1	111.0	118.5	121.7	126.4	129.7	133.0	133.0
Hotels and motels	701	97.6	95.0	96.1	99.1	107.8	106.2	109.6	110.1	109.7	107.9	108.8
Laundry, cleaning, and garment services	721	97.2	99.7	101.8	99.2	98.3	98.9	104.0	105.5	108.7	108.0	113.5
Photographic studios, portrait	722	100.1	94.9	96.6	92.8	97.7	105.9	117.4	129.3	126.6	133.7	153.4
Beauty shops	723	95.1	99.6	96.8	94.8	99.6	95.7	99.8	103.5	106.3	107.5	108.4
Barber shops	724	108.8	111.6	100.2	94.1	112.1	120.8	117.7	114.6	127.6	149.0	153.0
Funeral services and crematories	726	102.5	97.9	90.9	89.5	103.2	98.2	103.8	99.7	97.1	101.3	107.0
Automotive repair shops	753	105.7	108.1	106.9	98.7	103.3	104.0	112.3	119.5	114.1	115.2	121.2
Motion picture theaters	783	107.1	114.3	115.8	116.0	110.8	109.8	106.5	101.4	100.5	99.8	101.3

' Refers to output per employee.

" Refers to ouput per full-time equivalent employee year on fiscal basis.

n.e.c. = not elsewhere classified

- Data not available.

43. Unemployment rates, approximating U.S. concepts, in nine countries, quarterly data seasonally adjusted

Country	Annual average		1998		1999					
	1998	1999	III	IV	I	II	III	IV	I	II
United States	4.5	4.2	4.5	4.4	4.3	4.3	4.2	4.1	4.1	4.0
Canada	8.3	7.6	8.2	8.1	7.9	7.8	7.6	7.0	6.8	6.7
Australia	8.0	7.2	8.1	7.7	7.5	7.4	7.1	7.0	6.8	6.7
Japan	4.1	4.7	4.3	4.5	4.7	4.8	4.8	4.7	4.9	4.8
France	11.9	11.2	11.8	11.6	11.5	11.4	11.3	10.9	10.2	9.8
Germany	9.3	8.7	9.1	8.9	8.8	8.8	8.8	8.7	8.4	8.3
Italy[1]	12.0	11.5	12.0	12.0	11.8	11.7	11.5	11.2	11.2	10.8
Sweden	8.4	7.1	8.5	7.6	7.1	6.9	7.1	7.1	6.8	6.0
United Kingdom	6.3	6.1	6.3	6.2	6.2	6.1	5.9	5.9	5.8	5.5

[1] Quarterly rates are for the first month of the quarter.

NOTE: Quarterly figures for France, Germany, and the United Kingdom calculated by applying annual adjustment factors to current published data, and therefore should be viewed as less precise indicators of unemployment under U.S. concepts than the annual figures. See Notes on the data" for information on breaks in series. For further qualifications and historical data, see *Comparative Civilian Labor Force Statistics, Ten Countries, 1959–1998* (Bureau of Labor Statistics, Oct. 22, 1999).

44. Annual data: Employment status of the working-age population, approximating U.S. concepts, 10 countries

[Numbers in thousands]

Employment status and country	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Civilian labor force										
United States[1]	125,840	126,346	128,105	129,200	131,056	132,304	133,943	136,297	137,673	139,368
Canada	14,241	14,330	14,362	14,505	14,627	14,750	14,900	15,153	15,418	15,721
Australia	8,444	8,490	8,562	8,619	8,776	9,001	9,127	9,221	9,347	9,470
Japan	63,050	64,280	65,040	65,470	65,780	65,990	66,450	67,200	67,240	67,100
France	24,300	24,490	24,550	24,650	24,760	24,820	25,090	25,180	25,360	25,590
Germany[2]	29,410	39,130	39,040	39,140	39,210	39,100	39,180	39,450	39,430	–
Italy	22,670	22,940	22,910	22,570	22,450	22,460	22,570	22,680	22,960	23,130
Netherlands	6,640	6,750	6,950	7,090	7,190	7,270	7,370	7,530	7,720	–
Sweden	4,597	4,591	4,520	4,443	4,418	4,460	4,459	4,418	4,402	4,430
United Kingdom	28,730	28,610	28,410	28,310	28,280	28,480	28,620	28,760	28,870	29,090
Participation rate[3]										
United States[1]	66.5	66.2	66.4	66.3	66.6	66.6	66.8	67.1	67.1	67.1
Canada	67.1	66.5	65.7	65.4	65.2	64.9	64.7	64.9	65.1	65.6
Australia	64.6	64.1	63.9	63.6	63.9	64.6	64.6	64.3	64.4	64.2
Japan	62.6	63.2	63.4	63.3	63.1	62.9	63.0	63.2	62.8	62.4
France	56.0	56.0	55.8	55.6	55.5	55.2	55.5	55.3	55.4	55.7
Germany[2]	55.3	58.9	58.3	58.0	57.6	57.3	57.4	57.6	57.6	–
Italy	47.2	47.7	47.5	47.9	47.3	47.1	47.1	47.2	47.6	47.8
Netherlands	56.1	56.5	57.8	58.5	59.0	59.3	59.8	60.7	62.0	–
Sweden	67.4	67.0	65.7	64.5	63.7	64.1	64.0	63.3	62.8	63.2
United Kingdom	64.1	63.7	63.1	62.8	62.5	62.7	62.7	62.8	62.7	62.9
Employed										
United States[1]	118,793	117,718	118,492	120,259	123,060	124,900	126,708	129,558	131,463	133,488
Canada	13,084	12,851	12,760	12,858	13,112	13,357	13,463	13,774	14,140	14,531
Australia	7,859	7,676	7,637	7,680	7,921	8,235	8,344	8,429	8,597	8,785
Japan	61,710	62,920	63,620	63,810	63,860	63,890	64,200	64,900	64,450	63,930
France	22,100	22,140	21,990	21,740	21,710	21,890	21,960	22,060	22,390	22,760
Germany[2]	27,950	36,920	36,420	36,030	35,890	35,900	35,680	35,540	35,720	–
Italy	21,080	21,360	21,230	20,270	19,940	19,820	19,920	19,990	20,210	20,460
Netherlands	6,230	6,350	6,560	6,620	6,670	6,760	6,900	7,130	7,410	–
Sweden	4,513	4,447	4,265	4,028	3,992	4,056	4,019	3,973	4,034	4,117
United Kingdom	26,740	26,090	25,530	25,340	25,550	26,000	26,280	26,740	27,050	27,330
Employment-population ratio[4]										
United States[1]	62.8	61.7	61.5	61.7	62.5	62.9	63.2	63.8	64.1	64.3
Canada	61.7	59.7	58.4	58.0	58.4	58.8	58.5	59.0	59.7	60.6
Australia	60.1	57.9	57.0	56.6	57.7	59.1	59.1	58.8	59.2	59.6
Japan	61.3	61.8	62.0	61.7	61.3	60.9	60.9	61.0	60.2	59.4
France	50.9	50.6	49.9	49.0	48.7	48.7	48.5	48.4	48.9	49.6
Germany[2]	52.6	55.5	54.4	53.4	52.8	52.6	52.2	51.9	52.2	–
Italy	43.9	44.5	44.0	43.0	42.0	41.5	41.6	41.6	41.9	42.3
Netherlands	52.6	53.2	54.5	54.7	54.7	55.1	55.9	57.5	59.5	–
Sweden	66.1	64.9	62.0	58.5	57.6	58.3	57.7	58.9	57.6	58.7
United Kingdom	59.6	58.0	56.7	56.2	56.5	57.2	57.6	58.3	58.7	59.1
Unemployed										
United States[1]	7,047	8,628	9,613	8,940	7,996	7,404	7,236	6,739	6,210	6,210
Canada	1,157	1,480	1,602	1,647	1,515	1,393	1,437	1,379	1,277	1,190
Australia	585	814	925	939	856	766	783	791	750	685
Japan	1,340	1,360	1,420	1,660	1,920	2,100	2,250	2,300	2,790	3,170
France	2,210	2,350	2,560	2,910	3,050	2,920	3,130	3,120	2,980	2,830
Germany[2]	1,460	2,210	2,620	3,110	3,320	3,200	3,500	3,910	3,710	–
Italy	1,590	1,580	1,680	2,300	2,510	2,640	2,650	2,690	2,750	2,670
Netherlands	410	400	390	470	520	510	470	400	310	–
Sweden	84	144	255	415	426	404	440	445	368	313
United Kingdom	1,990	2,520	2,880	2,970	2,730	2,480	2,340	2,020	1,820	1,760
Unemployment rate										
United States[1]	5.6	6.8	7.5	6.9	6.1	5.6	5.4	4.9	4.5	4.2
Canada	8.1	10.3	11.2	11.4	10.4	9.4	9.6	9.1	8.3	7.6
Australia	6.9	9.6	10.8	10.9	9.7	8.5	8.6	8.6	8.0	7.2
Japan	2.1	2.1	2.2	2.5	2.9	3.2	3.4	3.4	4.1	4.7
France	9.1	9.6	10.4	11.8	12.3	11.8	12.5	12.4	11.8	11.1
Germany[2]	5.0	5.6	6.7	7.9	8.5	8.2	8.9	9.9	9.4	9.0
Italy	7.0	6.9	7.3	10.2	11.2	11.8	11.7	11.9	12.0	11.5
Netherlands	6.2	5.9	5.6	6.6	7.2	7.0	6.4	5.3	4.0	–
Sweden	1.8	3.1	5.6	9.3	9.6	9.1	9.9	10.1	8.4	7.1
United Kingdom	6.9	8.8	10.1	10.5	9.7	8.7	8.2	7.0	6.3	6.1

[1] Data for 1994 are not directly comparable with data for 1993 and earlier years. For additional information, see the box note under "Employment and Unemployment Data" in the notes to this section.

[2] Data from 1991 onward refer to unified Germany. See *Comparative Civilian Labor Force Statistics, Ten Countries, 1959–1998*, October 22, 1999, on the Internet at **http://stats.bls.gov/flsdata.htm**.

[3] Labor force as a percent of the working-age population.

[4] Employment as a percent of the working-age population.

NOTE: See "Notes on the data" for information on breaks in series for the United States, France, Germany, Italy, the Netherlands, and Sweden. Dash indicates data not available.

45. Annual indexes of manufacturing productivity and related measures, 12 countries

[1992 = 100]

Item and country	1960	1970	1980	1988	1989	1990	1991	1993	1994	1995	1996	1997	1998	1999
Output per hour														
United States	–	–	70.5	96.9	95.7	96.9	97.8	102.1	107.3	113.8	117.0	121.1	127.0	134.8
Canada	38.7	56.6	75.1	90.9	93.7	95.7	95.3	104.5	109.9	111.0	109.5	112.8	112.5	115.2
Japan	14.0	38.0	63.9	84.8	89.5	95.4	99.4	100.5	101.8	109.3	115.8	121.4	120.4	120.4
Belgium	18.0	32.9	65.4	92.0	96.9	96.8	99.1	102.5	108.4	113.2	115.5	122.4	122.6	122.6
Denmark	29.9	52.7	90.3	94.1	99.6	99.1	99.6	104.3	–	–	–	–	–	–
France	21.8	43.0	66.5	87.5	91.9	93.5	96.9	100.6	108.5	114.5	115.0	122.6	124.0	128.9
Germany	29.2	52.0	77.2	91.5	94.6	99.0	101.9	100.6	107.9	111.2	115.1	121.8	127.1	127.1
Italy	20.2	37.9	65.9	86.7	89.4	92.5	95.2	102.9	105.6	109.3	109.5	111.5	111.1	112.9
Netherlands	18.6	38.1	69.2	93.7	97.1	98.6	99.6	101.4	112.7	117.7	119.7	125.7	127.8	127.8
Norway	36.7	57.8	76.7	92.1	94.6	96.6	97.5	100.6	101.4	102.0	102.0	103.0	103.9	103.9
Sweden	27.3	52.2	73.1	90.5	93.2	94.6	95.5	107.3	119.4	121.9	124.5	133.0	135.6	139.5
United Kingdom	31.2	44.7	56.1	82.3	86.2	88.3	92.2	104.0	106.8	104.8	103.2	104.0	104.6	109.2
Output														
United States	–	–	75.8	103.2	102.4	101.6	98.3	103.5	111.1	118.4	121.3	127.7	133.5	139.3
Canada	34.2	60.6	86.0	110.1	112.6	108.6	99.0	104.0	113.2	118.1	119.8	128.1	133.1	141.3
Japan	10.7	38.8	59.9	84.6	90.2	96.3	101.4	96.0	95.4	100.6	106.7	111.1	103.6	103.9
Belgium	30.7	57.6	78.2	93.3	99.1	101.0	100.7	97.0	101.4	104.2	105.1	109.9	111.8	113.8
Denmark	40.8	68.0	91.3	100.8	104.3	102.7	101.7	99.0	109.3	114.7	109.7	112.6	115.3	111.5
France	31.0	64.1	88.7	92.2	97.2	99.1	99.8	95.7	100.3	104.9	104.6	109.7	111.5	114.2
Germany	41.5	70.9	85.3	90.9	94.0	99.1	102.8	91.8	93.5	93.7	92.5	95.8	100.7	103.6
Italy	21.9	45.8	80.4	94.5	98.1	99.6	99.2	96.4	102.2	107.2	105.6	108.3	110.3	111.4
Netherlands	31.7	59.5	77.4	92.8	96.9	100.1	100.6	98.2	104.2	107.8	108.4	114.1	116.6	103.6
Norway	56.5	89.1	103.6	105.3	101.3	100.2	98.3	102.7	106.7	109.0	110.1	115.7	117.6	114.0
Sweden	45.9	80.7	90.7	109.8	110.9	110.1	104.1	101.9	117.1	128.4	131.1	138.6	144.6	150.7
United Kingdom	67.7	90.3	87.2	101.4	105.4	105.3	100.0	101.4	106.1	107.8	108.2	109.6	109.9	109.7
Total hours														
United States	92.1	104.4	107.5	106.6	107.1	104.8	100.4	101.4	103.6	104.0	103.7	105.5	105.2	103.3
Canada	88.3	107.1	114.6	120.2	113.5	111.9	103.8	102.6	106.6	109.1	112.0	115.4	119.0	119.0
Japan	76.3	102.3	93.8	99.8	100.8	100.9	102.0	95.6	93.7	92.0	92.2	91.5	86.1	83.8
Belgium	170.7	174.7	119.7	101.5	102.3	104.3	101.5	94.7	93.6	92.0	91.0	89.8	90.5	91.5
Denmark	136.5	129.0	101.1	107.2	104.7	103.7	102.1	94.8	–	–	–	–	–	–
France	142.3	149.0	133.3	105.4	105.8	105.9	103.0	95.1	92.4	91.6	91.0	89.5	89.9	88.6
Germany	142.3	136.3	110.5	99.3	99.3	100.1	100.9	91.3	86.7	84.3	80.4	78.6	79.3	79.3
Italy	108.7	120.9	122.0	108.9	109.7	107.7	104.2	93.6	96.7	98.0	96.5	97.1	99.3	98.6
Netherlands	170.6	156.2	111.8	99.0	99.8	101.5	101.0	96.9	92.4	91.6	90.5	90.8	91.2	91.2
Norway	154.0	154.3	135.0	114.3	107.1	103.7	100.8	102.1	105.2	106.9	107.9	112.3	113.2	109.8
Sweden	168.3	154.7	124.0	121.4	119.0	116.4	109.0	94.9	98.1	105.3	105.3	104.2	106.6	108.0
United Kingdom	217.3	202.1	155.3	123.2	122.3	119.2	108.5	97.5	99.4	102.9	104.8	105.4	105.0	100.5
Compensation per hour														
United States	14.9	23.7	55.6	84.0	86.6	90.8	95.6	102.7	105.6	107.9	109.3	111.4	117.3	123.2
Canada	9.9	17.0	47.4	77.4	82.5	88.3	95.0	103.0	103.7	106.0	105.1	108.2	111.2	113.0
Japan	4.3	16.5	58.6	79.2	84.2	90.7	95.9	104.6	106.7	109.5	110.9	113.9	115.8	117.7
Belgium	5.4	13.7	52.5	81.1	85.9	90.1	97.3	104.8	106.1	109.2	110.4	114.2	115.8	116.3
Denmark	4.6	13.3	49.6	82.9	87.7	92.7	95.9	104.6	–	–	–	–	–	–
France	4.3	10.3	40.8	81.6	86.0	90.6	96.2	103.0	105.6	108.4	110.2	113.0	114.9	119.3
Germany	8.1	20.7	53.6	79.1	83.2	89.4	95.1	105.9	111.7	117.7	123.7	126.6	127.6	127.6
Italy	1.6	4.7	28.4	69.3	75.9	84.4	93.6	107.5	107.8	112.8	120.3	125.4	123.0	126.5
Netherlands	6.4	20.2	64.4	87.7	88.5	90.8	95.2	103.7	108.2	110.6	113.2	115.8	118.3	118.3
Norway	4.7	11.8	39.0	83.3	87.2	92.3	97.5	101.5	104.4	109.2	113.6	118.7	126.2	133.4
Sweden	4.1	10.7	37.3	71.8	79.4	87.8	95.4	97.2	99.8	106.3	114.2	119.7	123.3	127.4
United Kingdom	3.1	6.3	33.2	67.7	72.9	80.9	90.5	104.3	106.5	107.4	108.2	111.4	117.0	122.6
Unit labor costs: National currency basis														
United States	–	–	78.8	86.7	90.5	93.7	97.7	100.6	98.5	94.8	93.5	92.0	92.4	91.4
Canada	25.6	30.1	63.2	85.2	88.0	92.3	99.7	97.6	94.3	95.5	95.9	95.9	98.8	98.1
Japan	30.9	43.3	91.7	93.4	94.0	95.0	96.5	104.1	104.9	100.1	95.8	93.8	96.2	94.9
Belgium	30.1	41.7	80.3	88.1	88.7	93.0	98.1	102.3	97.9	96.4	95.6	93.3	93.7	93.4
Denmark	15.4	25.2	55.0	88.2	88.1	93.6	96.3	100.1	93.0	93.8	100.9	102.0	102.8	108.9
France	19.5	24.0	61.2	93.3	93.6	96.8	99.3	102.4	97.3	94.7	95.9	92.2	92.7	92.6
Germany	27.8	39.8	69.4	86.5	87.9	90.3	93.3	105.3	103.6	105.9	107.5	103.9	100.4	100.4
Italy	7.9	12.4	43.1	79.9	84.9	91.3	98.4	104.4	102.1	103.2	109.9	112.4	110.8	112.0
Netherlands	34.4	52.9	93.0	93.6	91.1	92.1	95.5	102.3	96.0	94.0	94.6	92.2	92.5	92.5
Norway	12.9	20.4	50.8	90.4	92.2	95.6	100.0	100.9	102.9	107.1	111.4	115.2	121.5	128.5
Sweden	15.0	20.6	51.0	79.4	85.1	92.8	100.0	90.6	83.6	87.2	91.7	90.0	90.9	91.3
United Kingdom	9.8	14.1	59.1	82.2	84.6	91.6	98.2	100.3	99.7	102.5	104.8	107.1	111.9	112.3
Unit labor costs: U.S. dollar basis														
United States	–	–	78.8	86.7	90.5	93.7	97.7	100.6	98.5	94.8	93.5	92.0	92.4	91.4
Canada	32.0	34.8	65.3	83.6	89.8	95.6	105.1	91.4	83.4	84.1	85.0	83.6	80.5	79.8
Japan	10.9	15.3	51.3	92.4	86.3	83.1	90.9	118.8	130.1	135.1	111.7	98.3	93.1	105.7
Belgium	19.4	27.0	88.3	77.0	72.3	89.5	92.3	95.1	94.2	105.2	99.3	83.7	83.0	79.3
Denmark	13.5	20.3	58.9	79.0	72.6	91.3	90.8	93.2	88.3	101.1	105.0	93.1	92.6	94.1
France	21.1	23.0	76.8	82.9	77.6	94.1	93.1	95.6	92.9	100.6	99.2	83.6	83.2	79.6
Germany	10.4	17.1	59.6	76.9	73.0	87.3	87.8	99.4	99.8	115.5	111.6	93.5	89.1	89.1
Italy	15.6	24.4	62.0	75.6	76.2	93.8	97.6	81.8	78.1	78.0	87.8	81.3	78.6	75.9
Netherlands	16.0	25.7	82.3	83.2	75.5	88.9	89.8	96.8	92.8	103.0	98.6	83.0	82.0	82.0
Norway	11.3	17.8	63.9	86.1	82.9	95.0	95.7	88.3	90.7	105.0	107.1	101.1	100.0	102.2
Sweden	16.9	23.1	70.3	75.4	76.8	91.3	96.3	67.7	63.1	71.2	79.7	68.6	66.6	64.3
United Kingdom	15.6	19.2	77.8	82.9	78.5	92.5	98.2	85.3	86.5	91.6	95.6	99.3	105.0	102.8

– Data not available.

46. Occupational injury and illness rates by industry,[1] United States

Industry and type of case[2]	Incidence rates per 100 full-time workers[3]											
	1987	1988	1989[1]	1990	1991	1992	1993[4]	1994[4]	1995[4]	1996[4]	1997[4]	1998[4]
PRIVATE SECTOR[5]												
Total cases	8.3	8.6	8.6	8.8	8.4	8.9	8.5	8.4	8.1	7.4	7.1	6.7
Lost workday cases	3.8	4.0	4.0	4.1	3.9	3.9	3.8	3.8	3.6	3.4	3.3	3.1
Lost workdays	69.9	76.1	78.7	84.0	86.5	93.8	–	–	–	–	–	–
Agriculture, forestry, and fishing[5]												
Total cases	11.2	10.9	10.9	11.6	10.8	11.6	11.2	10.0	9.7	8.7	8.4	7.9
Lost workday cases	5.7	5.6	5.7	5.9	5.4	5.4	5.0	4.7	4.3	3.9	4.1	3.9
Lost workdays	94.1	101.8	100.9	112.2	108.3	126.9	–	–	–	–	–	–
Mining												
Total cases	8.5	8.8	8.5	8.3	7.4	7.3	6.8	6.3	6.2	5.4	5.9	4.9
Lost workday cases	4.9	5.1	4.8	5.0	4.5	4.1	3.9	3.9	3.9	3.2	3.7	2.9
Lost workdays	144.0	152.1	137.2	119.5	129.6	204.7	–	–	–	–	–	–
Construction												
Total cases	14.7	14.6	14.3	14.2	13.0	13.1	12.2	11.8	10.6	9.9	9.5	8.8
Lost workday cases	6.8	6.8	6.8	6.7	6.1	5.8	5.5	5.5	4.9	4.5	4.4	4.0
Lost workdays	135.8	142.2	143.3	147.9	148.1	161.9	–	–	–	–	–	–
General building contractors:												
Total cases	14.2	14.0	13.9	13.4	12.0	12.2	11.5	10.9	9.8	9.0	8.5	8.4
Lost workday cases	6.5	6.4	6.5	6.4	5.5	5.4	5.1	5.1	4.4	4.0	3.7	3.9
Lost workdays	134.0	132.2	137.3	137.6	132.0	142.7	–	–	–	–	–	–
Heavy construction, except building:												
Total cases	14.5	15.1	13.8	13.8	12.8	12.1	11.1	10.2	9.9	9.0	8.7	8.2
Lost workday cases	6.4	7.0	6.5	6.3	6.0	5.4	5.1	5.0	4.8	4.3	4.3	4.1
Lost workdays	139.1	162.3	147.1	144.6	160.1	165.8	–	–	–	–	–	–
Special trades contractors:												
Total cases	15.0	14.7	14.6	14.7	13.5	13.8	12.8	12.5	11.1	10.4	10.0	9.1
Lost workday cases	7.1	7.0	6.9	6.9	6.3	6.1	5.8	5.8	5.0	4.8	4.7	4.1
Lost workdays	135.7	141.1	144.9	153.1	151.3	168.3	–	–	–	–	–	–
Manufacturing												
Total cases	11.9	13.1	13.1	13.2	12.7	12.5	12.1	12.2	11.6	10.6	10.3	9.7
Lost workday cases	5.3	5.7	5.8	5.8	5.6	5.4	5.3	5.5	5.3	4.9	4.8	4.7
Lost workdays	95.5	107.4	113.0	120.7	121.5	124.6	–	–	–	–	–	–
Durable goods:												
Total cases	12.5	14.2	14.1	14.2	13.6	13.4	13.1	13.5	12.8	11.6	11.3	10.7
Lost workday cases	5.4	5.9	6.0	6.0	5.7	5.5	5.4	5.7	5.6	5.1	5.1	5.0
Lost workdays	96.8	111.1	116.5	123.3	122.9	126.7	–	–	–	–	–	–
Lumber and wood products:												
Total cases	18.9	19.5	18.4	18.1	16.8	16.3	15.9	15.7	14.9	14.2	13.5	13.2
Lost workday cases	9.6	10.0	9.4	8.8	8.3	7.6	7.6	7.7	7.0	6.8	6.5	6.8
Lost workdays	176.5	189.1	177.5	172.5	172.0	165.8	–	–	–	–	–	–
Furniture and fixtures:												
Total cases	15.4	16.6	16.1	16.9	15.9	14.8	14.6	15.0	13.9	12.2	12.0	11.4
Lost workday cases	6.7	7.3	7.2	7.8	7.2	6.6	6.5	7.0	6.4	5.4	5.8	5.7
Lost workdays	103.6	115.7	–	–	–	128.4	–	–	–	–	–	–
Stone, clay, and glass products:												
Total cases	14.9	16.0	15.5	15.4	14.8	13.6	13.8	13.2	12.3	12.4	11.8	11.8
Lost workday cases	7.1	7.5	7.4	7.3	6.8	6.1	6.3	6.5	5.7	6.0	5.7	6.0
Lost workdays	135.8	141.0	149.8	160.5	156.0	152.2	–	–	–	–	–	–
Primary metal industries:												
Total cases	17.0	19.4	18.7	19.0	17.7	17.5	17.0	16.8	16.5	15.0	15.0	14.0
Lost workday cases	7.4	8.2	8.1	8.1	7.4	7.1	7.3	7.2	7.2	6.8	7.2	7.0
Lost workdays	145.8	161.3	168.3	180.2	169.1	175.5	–	–	–	–	–	–
Fabricated metal products:												
Total cases	17.0	18.8	18.5	18.7	17.4	16.8	16.2	16.4	15.8	14.4	14.2	13.9
Lost workday cases	7.2	8.0	7.9	7.9	7.1	6.6	6.7	6.7	6.9	6.2	6.4	6.5
Lost workdays	121.9	138.8	147.6	155.7	146.6	144.0	–	–	–	–	–	–
Industrial machinery and equipment:												
Total cases	11.3	12.1	12.1	12.0	11.2	11.1	11.1	11.6	11.2	9.9	10.0	9.5
Lost workday cases	4.4	4.7	4.8	4.7	4.4	4.2	4.2	4.4	4.4	4.0	4.1	4.0
Lost workdays	72.7	82.8	86.8	88.9	86.6	87.7	–	–	–	–	–	–
Electronic and other electrical equipment:												
Total cases	7.2	8.0	9.1	9.1	8.6	8.4	8.3	8.3	7.6	6.8	6.6	5.9
Lost workday cases	3.1	3.3	3.9	3.8	3.7	3.6	3.5	3.6	3.3	3.1	3.1	2.8
Lost workdays	55.9	64.6	77.5	79.4	83.0	81.2	–	–	–	–	–	–
Transportation equipment:												
Total cases	13.5	17.7	17.7	17.8	18.3	18.7	18.5	19.6	18.6	16.3	15.4	14.6
Lost workday cases	5.7	6.6	6.8	6.9	7.0	7.1	7.1	7.8	7.9	7.0	6.6	6.6
Lost workdays	105.7	134.2	138.6	153.7	166.1	186.6	–	–	–	–	–	–
Instruments and related products:												
Total cases	5.8	6.1	5.6	5.9	6.0	5.9	5.6	5.9	5.3	5.1	4.8	4.0
Lost workday cases	2.4	2.6	2.5	2.7	2.7	2.7	2.5	2.7	2.4	2.3	2.3	1.9
Lost workdays	43.9	51.5	55.4	57.8	64.4	65.3	–	–	–	–	–	–
Miscellaneous manufacturing industries:												
Total cases	10.7	11.3	11.1	11.3	11.3	10.7	10.0	9.9	9.1	9.5	8.9	8.1
Lost workday cases	4.6	5.1	5.1	5.1	5.1	5.0	4.6	4.5	4.3	4.4	4.2	3.9
Lost workdays	81.5	91.0	97.6	113.1	104.0	108.2	–	–	–	–	–	–

See footnotes at end of table.

46. Continued—Occupational injury and illness rates by industry,[1] United States

Industry and type of case[2]	Incidence rates per 100 full-time workers[3]											
	1987	1988	1989[1]	1990	1991	1992	1993[4]	1994[4]	1995[4]	1996[4]	1997[4]	1998[4]
Nondurable goods:												
Total cases	11.1	11.4	11.6	11.7	11.5	11.3	10.7	10.5	9.9	9.2	8.8	8.2
Lost workday cases	5.1	5.4	5.5	5.6	5.5	5.3	5.0	5.1	4.9	4.6	4.4	4.3
Lost workdays	93.5	101.7	107.8	116.9	119.7	121.8	–	–	–	–	–	–
Food and kindred products:												
Total cases	17.7	18.5	18.5	20.0	19.5	18.8	17.6	17.1	16.3	15.0	14.5	13.6
Lost workday cases	8.6	9.2	9.3	9.9	9.9	9.5	8.9	9.2	8.7	8.0	8.0	7.5
Lost workdays	153.7	169.7	174.7	202.6	207.2	211.9	–	–	–	–	–	–
Tobacco products:												
Total cases	8.6	9.3	8.7	7.7	6.4	6.0	5.8	5.3	5.6	6.7	5.9	6.4
Lost workday cases	2.5	2.9	3.4	3.2	2.8	2.4	2.3	2.4	2.6	2.8	2.7	3.1
Lost workdays	46.4	53.0	64.2	62.3	52.0	42.9	–	–	–	–	–	–
Textile mill products:												
Total cases	9.0	9.6	10.3	9.6	10.1	9.9	9.7	8.7	8.2	7.8	6.7	6.7
Lost workday cases	3.6	4.0	4.2	4.0	4.4	4.2	4.1	4.0	4.1	3.6	3.1	3.4
Lost workdays	65.9	78.8	81.4	85.1	88.3	87.1	–	–	–	–	–	–
Apparel and other textile products:												
Total cases	7.4	8.1	8.6	8.8	9.2	9.5	9.0	8.9	8.2	7.4	7.0	6.2
Lost workday cases	3.1	3.5	3.8	3.9	4.2	4.0	3.8	3.9	3.6	3.3	3.1	2.6
Lost workdays	59.5	68.2	80.5	92.1	99.9	104.6	–	–	–	–	–	–
Paper and allied products:												
Total cases	12.8	13.1	12.7	12.1	11.2	11.0	9.9	9.6	8.5	7.9	7.3	7.1
Lost workday cases	5.8	5.9	5.8	5.5	5.0	5.0	4.6	4.5	4.2	3.8	3.7	3.7
Lost workdays	122.3	124.3	132.9	124.8	122.7	125.9	–	–	–	–	–	–
Printing and publishing:												
Total cases	6.7	6.6	6.9	6.9	6.7	7.3	6.9	6.7	6.4	6.0	5.7	5.4
Lost workday cases	3.1	3.2	3.3	3.3	3.2	3.2	3.1	3.0	3.0	2.8	2.7	2.8
Lost workdays	55.1	59.8	63.8	69.8	74.5	74.8	–	–	–	–	–	–
Chemicals and allied products:												
Total cases	7.0	7.0	7.0	6.5	6.4	6.0	5.9	5.7	5.5	4.8	4.8	4.2
Lost workday cases	3.1	3.3	3.2	3.1	3.1	2.8	2.7	2.8	2.7	2.4	2.3	2.1
Lost workdays	58.8	59.0	63.4	61.6	62.4	64.2	–	–	–	–	–	–
Petroleum and coal products:												
Total cases	7.3	7.0	6.6	6.6	6.2	5.9	5.2	4.7	4.8	4.6	4.3	3.9
Lost workday cases	3.1	3.2	3.3	3.1	2.9	2.8	2.5	2.3	2.4	2.5	2.2	1.8
Lost workdays	65.9	68.4	68.1	77.3	68.2	71.2	–	–	–	–	–	–
Rubber and miscellaneous plastics products:												
Total cases	15.9	16.3	16.2	16.2	15.1	14.5	13.9	14.0	12.9	12.3	11.9	11.2
Lost workday cases	7.6	8.1	8.0	7.8	7.2	6.8	6.5	6.7	6.5	6.3	5.8	5.8
Lost workdays	130.8	142.9	147.2	151.3	150.9	153.3	–	–	–	–	–	–
Leather and leather products:												
Total cases	12.4	11.4	13.6	12.1	12.5	12.1	12.1	12.0	11.4	10.7	10.6	9.8
Lost workday cases	5.8	5.6	6.5	5.9	5.9	5.4	5.5	5.3	4.8	4.5	4.3	4.5
Lost workdays	114.5	128.2	130.4	152.3	140.8	128.5	–	–	–	–	–	–
Transportation and public utilities												
Total cases	8.4	8.9	9.2	9.6	9.3	9.1	9.5	9.3	9.1	8.7	8.2	7.3
Lost workday cases	4.9	5.1	5.3	5.5	5.4	5.1	5.4	5.5	5.2	5.1	4.8	4.3
Lost workdays	108.1	118.6	121.5	134.1	140.0	144.0	–	–	–	–	–	–
Wholesale and retail trade												
Total cases	7.7	7.8	8.0	7.9	7.6	8.4	8.1	7.9	7.5	6.8	6.7	6.5
Lost workday cases	3.4	3.5	3.6	3.5	3.4	3.5	3.4	3.4	3.2	2.9	3.0	2.8
Lost workdays	56.1	60.9	63.5	65.6	72.0	80.1	–	–	–	–	–	–
Wholesale trade:												
Total cases	7.4	7.6	7.7	7.4	7.2	7.6	7.8	7.7	7.5	6.6	6.5	6.5
Lost workday cases	3.7	3.8	4.0	3.7	3.7	3.6	3.7	3.8	3.6	3.4	3.2	3.3
Lost workdays	64.0	69.2	71.9	71.5	79.2	82.4	–	–	–	–	–	–
Retail trade:												
Total cases	7.8	7.9	8.1	8.1	7.7	8.7	8.2	7.9	7.5	6.9	6.8	6.5
Lost workday cases	3.3	3.4	3.4	3.4	3.3	3.4	3.3	3.3	3.0	2.8	2.9	2.7
Lost workdays	52.9	57.6	60.0	63.2	69.1	79.2	–	–	–	–	–	–
Finance, insurance, and real estate												
Total cases	2.0	2.0	2.0	2.4	2.4	2.9	2.9	2.7	2.6	2.4	2.2	1.9
Lost workday cases	.9	.9	.9	1.1	1.1	1.2	1.2	1.1	1.0	.9	0.9	0.7
Lost workdays	14.3	17.2	17.6	27.3	24.1	32.9	–	–	–	–	–	–
Services												
Total cases	5.5	5.4	5.5	6.0	6.2	7.1	6.7	6.5	6.4	6.0	5.6	5.2
Lost workday cases	2.7	2.6	2.7	2.8	2.8	3.0	2.8	2.8	2.8	2.6	2.5	2.4
Lost workdays	45.8	47.7	51.2	56.4	60.0	68.6	–	–	–	–	–	–

[1] Data for 1989 and subsequent years are based on the *Standard Industrial Classification Manual*, 1987 Edition. For this reason, they are not strictly comparable with data for the years 1985–88, which were based on the *Standard Industrial Classification Manual*, 1972 Edition, 1977 Supplement.

[2] Beginning with the 1992 survey, the annual survey measures only nonfatal injuries and illnesses, while past surveys covered both fatal and nonfatal incidents. To better address fatalities, a basic element of workplace safety, BLS implemented the Census of Fatal Occupational Injuries.

[3] The incidence rates represent the number of injuries and illnesses or lost workdays per 100 full-time workers and were calculated as (N/EH) X 200,000, where:

N = number of injuries and illnesses or lost workdays;

EH = total hours worked by all employees during the calendar year; and

200,000 = base for 100 full-time equivalent workers (working 40 hours per week, 50 weeks per year).

[4] Beginning with the 1993 survey, lost workday estimates will not be generated. As of 1992, BLS began generating percent distributions and the median number of days away from work by industry and for groups of workers sustaining similar work disabilities.

[5] Excludes farms with fewer than 11 employees since 1976.

– Data not available.

47. Fatal occupational injuries by event or exposure, 1993–98

Event or exposure[1]	Fatalities			
	1993–97	1997[2]	1998	
	Average	Number	Number	Percent
Total	6,335	6,238	6,026	100
Transportation incidents	2,611	2,605	2,630	44
Highway incident	1,334	1,393	1,431	24
Collision between vehicles, mobile equipment	652	640	701	12
Moving in same direction	109	103	118	2
Moving in opposite directions, oncoming	234	230	271	4
Moving in intersection	132	142	142	2
Vehicle struck stationary object or equipment	249	282	306	5
Noncollision incident	360	387	373	6
Jackknifed or overturned—no collision	267	298	300	5
Nonhighway (farm, industrial premises) incident	388	377	384	6
Overturned	214	216	216	4
Aircraft	315	261	223	4
Worker struck by a vehicle	373	367	413	7
Water vehicle incident	106	109	112	2
Railway	83	93	60	1
Assaults and violent acts	1,241	1,111	960	16
Homicides	995	860	709	12
Shooting	810	708	569	9
Stabbing	75	73	61	1
Other, including bombing	110	79	79	1
Self-inflicted injuries	215	216	223	4
Contact with objects and equipment	1,005	1,035	941	16
Struck by object	573	579	517	9
Struck by falling object	369	384	317	5
Struck by flying object	65	54	58	1
Caught in or compressed by equipment or objects	290	320	266	4
Caught in running equipment or machinery	153	189	129	2
Caught in or crushed in collapsing materials	124	118	140	2
Falls	668	716	702	12
Fall to lower level	591	653	623	10
Fall from ladder	94	116	111	2
Fall from roof	139	154	156	3
Fall from scaffold, staging	83	87	97	2
Fall on same level	52	44	51	1
Exposure to harmful substances or environments	586	554	572	9
Contact with electric current	320	298	334	6
Contact with overhead power lines	128	138	153	3
Contact with temperature extremes	43	40	46	1
Exposure to caustic, noxious, or allergenic substances	120	123	104	2
Inhalation of substances	70	59	48	1
Oxygen deficiency	101	90	87	1
Drowning, submersion	80	72	75	1
Fires and explosions	199	196	205	3
Other events or exposures[3]	26	21	16	-

[1] Based on the 1992 BLS Occupational Injury and Illness Classification Structures.

[2] The BLS news release issued August 12, 1998, reported a total of 6,218 fatal work injuries for calendar year 1997. Since then, an additional 20 job-related fatalities were identified, bringing the total job-related fatality count for 1997 to 6,238.

[3] Includes the category "Bodily reaction and exertion."

NOTE: Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. Dash indicates less than 0.5 percent.

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